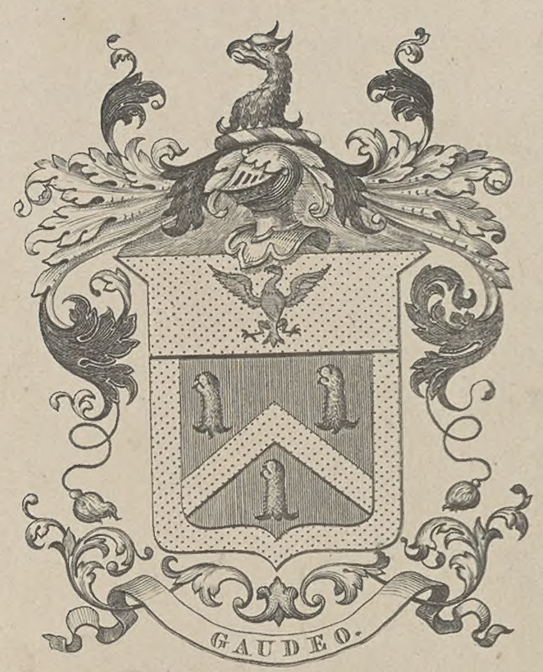


John Carter Brown.



F: Ottens Inv: et Fecit. J: Ooſterwyk Excudit.

10=10=0.

MARIÆ SIBILLÆ MERIAN
DISSERTATIO
DE
GENERATIONE
ET
METAMORPHOSIBUS
INSECTORUM
SURINAMENSIUM:

In quâ, præter

VERMES & ERUCAS SURINAMENSES,

EARUMQUE ADMIRANDAM METAMORPHOSIN,

Plantæ, flores & fructus, quibus veſcuntur, & in quibus fuerunt inventæ, exhibentur.

HIS ADJUNGUNTUR

BUFONES, LACERTI, SERPENTES, ARANEÆ,

ALIAQUE ADMIRANDA ISTIUS REGIONIS ANIMALCULA; omnia manu ejuſdem Matronæ in America ad vivum accurate depicta, & nunc æri inciſa.

ACCEDIT

Appendix Transformationum PISCIUM in RANAS, & RANARUM in PISCES.



AMSTELÆDAMI,

Apud JOANNEM OOSTERWYK,

cIↄ Iↄ ccxix.

Monentur Lectores, in Bibliopolio noſtro etiam proſtare ejuſdem MARIÆ SIBILLÆ MERIAN Diſſertationem de Inſectis Europæis, quæ pariter ad vivum depicta, & nativis coloribus ornata ſunt.

John Carter Brown



Viro Ampliſſimo & Magnifico

D°. BALTHAZARI SCÓTT,

J. U. D.

Celeberrimæ Reipublicæ Amſtelodamenſis

Judici & Senatori,

Ibidemque Comitatûs Hollandiæ
QUÆSTORI Fideliſſimo

ut &

Territorii, vulgo de Watergraeſs-meer,
BAILLIVO.
Ejusdemque aggerum curandorum
PRAEFECTO SUMMO.
Tam Natalium ſplendore
Quam avitis, at maximé propriis
VIRTUTIBUS, & HONORIBUS
Illuſtri, & inclyto,
Optimé de Patriâ merito, indiesque merenti.
Quæ omnia Carmen meum Belgicum
Indicat.

DOorlugte hoofdttelg van uw Hooggebooren Stam,
Groot Agtbre Schepen van ons magtig Amſterdam,
En wakkre Raedtsheer, laet uw heusheyt niet mishaegen,
Dat ik dit Boekjuweel u nedrigh op kom draegen,
Zoo zal de naem van SCÓTT aen't werk van MERIAEN
Een luyſter geven, door geene Eeuwen te vergaen.

Quod ſummâ obſervantiâ
in Obſequii ſui teſſeram
Vovet
Humillimus Cliens

JOANNES OOSTERWYK.

LECTORI
SALUTEM
EDITOR.

Ex defunctæ MARIÆ SYBILLÆ MERIAN vulgati operis præfatione manifeſte ſatis contenta & ſcopum quiſque curioſus intelligere poteſt, & quouſque artificioſa illa ac indefeſſa mulier illud perduxit, quare monendum mihi ſolummodo reſtat, quod poſt diligentiſſimæ fœminæ mortem, ejuſque filiarum peregrinationes, hujus ſcilicet in Surinamen, illius vero in Muſcoviam, elegantiſſimo hoc Surinamenſium Inſectorum opere, ac deinde Europeënſium emtione potitus, atque perinde compertus ſim, opera hæc per partes quidem aliquas edita, nullum vero opus completum evulgatum eſſe, quare non Europeënſia Inſecta completari tantum & evulgari ſtatuebam, aſt ilico tam belgico, quam Latino idiomate, uti ſatis notum, edidi.

Multæ vero ſeſe mihi difficultates in hocce altero & ampliſſimo opere exequendo oppoſuerunt, cum magno depictorum Inſectorum Surinamenſium numero, illorumque alimentis potitus, quorum tamen minima pars æri inciſa erat, mecum quidem conſulebam, variis harum amoenitatum Amatoribus inſtigatus, elegantiſſimum hoc opus juxta ipſum auctoris propoſitum ad finem perducere, & artificioſiſſimo Titulo aliiſque ornamentis illuſtratum evulgare, at plurimum de propoſità via aberraſſem, & fruſtraneos ſumptus feciſſem, niſi verus ille indagator atque rarioris hujusmodi ſupellectilis poſſeſſor, SIMON SCHYNVOET, (propter virtutes eximias & ingenii dotes rariores cuivis amantiſſimus) opem attuliſſet, adque preſentem conditionem librum hunc præſtantiſſimum redegiſſet ſuo conſilio prudentiſſimo, ita ut nunquam auctior edi poſſit, cum omne Surinamenſe ſupellectile, quod laudabilis memoriæ mulier illa collegerat, æri hîc inciſum oſtenditur, quod è ſuperabundanti attamen duabus æreis tabulis, mihi favore amiciſſimi A SEBÆ ſuppeditatis ex ſimilis ſupellectilis gazophylacio ſuo elegantiſſimo, auxi, ſicuti pag. 71. & 72. manifeſte lectori patebit.

JOANNES OOSTERWYK.

OP DE

VERHANDELING DER

SURINAEMSCHE INSECTEN

VAN WYLE

JUFF[R]. MARIA SYBILLA MERIAEN.

ZO opent zich een nieuwe Hóf
Van overzeeſch *Geboomte* en *Bloemen.*
Wie leerſaem is, vind hier weer ſtóf,
Om 's wyzen Scheppers maght te roemen,
En uyt het allerminſte Kruydt
Te ontdekken, hoe ver zy verdwaelen,
Die goddeloos en dwaes verhaelen,
Dat alles uyt zich zelven ſpruyt.
Elk Blad, elk Bloeyſſel toont Gods werking,
En wyſt zyne onderhouding aen,
En leert, dat zonder die verſterking
Hier alles buyten maet zou gaen.
Niet minder kan men dit beſliſſen
In dit geöpent Kabinet,
Door MERIAEN te ſaem gezet
Uyt *Surinaemſche Hagediſſen*,
Uyt *Vorſchen*, *Padden*, *Slang* en *Spin*,
Uyt *Mieren*, *Rups*, en vremde *Wórmen*,
Die, eerſtelijk verandert in
Een *Popje*, naderhant vervórmen
In *Uyltjes*, van verſcheyden aert,
En veelerley koleur en vlekken,
Die yders ogen naer zich trekken,
Als de uyterſte verwond'ring waert.
Ik kan myn oogluſt niet verzaeden:
Hoe meêr ik lette op kleur en lyf,
Hoe meêr 'k verlief op deeze bladen,
Hoe hoger 'k opgetogen blyf,
En my verplicht vind dank te zeggen
Aen Vrou SYBILLAES geeſt, en vlyt,
Die vry voor 't knaegen van den tydt,
Haer naem in yders mond zal leggen,
En leeven doet na haeren doot,
Nu *Ooſterwyk*, die uyt ontfarmen
Haer Letter-weeskind maekte groot,
Het ſteunen leert op eygen' armen,
Dies 't ook uyt dankbaerheyt zyn Voogt,
En Moeders roem en zórg verhoogt.

M. BROUËRIUS VAN NIEDEK. *J. Ctus.*

MARIA SIBYLLA MERIAN

AD

LECTOREM.

INſectis jam ab ipſa juventute mea examinandis occupata, primum de bombyce Francofurti ad Mœnum in patria civitate feci initium; dein vero, Papiliones multo pulchriores & diurnos & nocturnos ex aliis produci erucis, animadverſo, ut omnes, quas invenire licuit, erucas congregarem, earumque metamorphoſes notarem, commota ſum. Quamobrem humana plane deſerens conſortia, unice his vacavi obſervationibus, quo me in arte pictoria magis exercere, & ad vivùm ſingulas tum adumbrare, tum vivis coloribus exprimere poſſem. Ita factum eſt, ut cuncta, quæ initio Francofurti & poſtea Noribergæ reperi Inſecta, in Pergamenis mihi pulchrè admodum picta congregarem. Hæc ubi poſtmodum caſu in quorundam curioſorum inciderunt conſpectum, maxime illi, ut hasce de Inſectis obſervationes meas publico darem, atque ſic induſtriis naturæ examinatoribus eorumque expectationi ſatisfacerem, tum temporis cohortati ſunt. Permota tandem perſuaſionibus, figuris mea manu æri inciſis, easdem edidi, Partem Primam in Quarto, Anno 1679. Secundam Anno 1683. In Friſiam deinde ac Belgium profecta, porro in examine Inſectorum continuavi, præſertim in Friſia, cum in Belgio magis quam alibi deeſſet occaſio, illis præcipue inveſtigandis, quæ in ericetis ac locis cæspoſis reperiuntur. Aliorum tamen curioſorum ſolertia iſtum ſæpiſſime ſupplevit defectum, qui erucas mihi attulerunt, ad explorandas ulterius earum metamorphoſes: quemadmodum plures ejusmodi collectas mecum ſervo obſervationes, mihi præcedentibus binis Partibus alias adhuc addendi anſam ſuppeditantes. Verum in Belgio, quot animalium genera ex utraque India & Orientali & Occidentali advehi curarentur, cum admiratione perſpexi, maxime cum egregium dignata fuiſſem perluſtrare theſaurum Nobiliſſimi & Ampliſſimi Viri, NICOLAI WITSEN, *in Urbe Amſtelodamenſi Conſulis & in Societate Orientalis Indiæ Aſſeſſoris meritiſſimi*, &c. ut & Nobiliſſimi Viri JONÆ WITSEN, *eidem civitati à ſecretis.* Vidi etiam poſtea theſaurum Clariſſ. FRIDERICI RUISCHII, M.D. *Anatomiæ & Botanices Profeſſoris*, nec non LIVINI VINCENT, & aliorum quamplurimos, ubi hæc atque alia numero innumera conſpexi Inſecta, ita tamen, ut in illis tum origo, tum generatio deficeret, qua ratione ſcilicet ex erucis fierent aureliæ, & quomodo ulterius transformarentur. Hoc ipſo incitata, longinquum & ſumtuoſum iter tentavi, atque in terram Surinamenſem in America, (regionem calidam & humidam, unde Viri prædicti iſta acceperunt Inſecta,) menſe Junio anni 1699. transnavigavi, ut accuratius eadem indagarem, & in ſtudio meo pergerem, ad menſem Junii anno 1701. ibidem commorata: tum autem Belgium verſus iterum vela feci, atque inſequente menſe Septembris die 23. ibi rurſus appuli. Sexaginta has figuras cum illarum obſervationibus iſthuc loci in Pergamenis naturali magnitudine ſummo cum ſtudio pinxi; veluti apud me una cum animalculis ſiccatis cerni poſſunt. Quam vero animo conceperam, in regione illa opportunitatem Inſecta examinandi non inveni, quippe cum ejusdem clima ſit calidisſimum, atque hic æſtus naturæ meæ adverſetur: qua de re coacta domum citius reverti, ac mihi antea propoſitum erat. Poſteaquam in Belgio eſſem redux, picturasque meas nonnulli cernerent rerum amantes, hi prelo easdem committerem & publici juris facerem, valde à me contendere cœperunt, primum hoc & pul-

pulcherrimum ex Operibus unquam in America pictis eſſe, arbitrati. Verùm initio ſumtus, ad perficiendum librum impendendi, me ab eo deterruerunt, donec tandem hoc quoque onere ſuſcepto, illi manus admoverem.

Conſiſtit itaque hoc Opus ex figuris æneis ſexaginta, quibus ultra nonaginta Obſervationes de Erucis, Vermibus & Acaris exhibentur, quomodo illa cum exuviis priſtinum mutent colorem & formam, & tandem in Papiliones, Phalænas, Scarabæos, Apes & Muscas transfigurentur. Omnia hæc animalcula iisdem quæque appoſui plantis, floribus ac fructibus, quæ ſingulis escam præbuerunt: illisque adhuc addita eſt generatio Araneorum Indiæ Occidentalis, Formicarum, Serpentum, Lacertarum, rariorum Bufonum atque Ranarum; omnia in America à me obſervata & ad vivùm delineata, paucis ſolùm exceptis, quæ ex ore Indorum percepta junxi.

Quæſtum in Opere hoc conficiendo non quæſivi, modo adhibitos mihi reddat ſumtus, contenta: neque enim his ad perficiendum illud peperci, ſed à peritiſſimis artificum tabulas æneas incidi, atque optimam huic ſcopo chartam eligi curavi; ut ita artis non ſolum gnaris, verum etiam cunctis Inſectorum & Plantarum ſtudioſis, rem facerem jucundam eorumque expectationi reſponderem. Quod ſi illum me conſecutam eſſe finem, atque ſimul & ſatisfeciſſe, & non diſplicuiſſe, animadvertero, non parum gaudebo.

Scriptas explicationes in hoc libro, ad exemplum Cl. Bidloo, Profeſſoris Lugdunenſis, in ſua Anatomia, binis ſemper figuris interpoſui, integro folio expreſſas. Easdem extendere longius facilis mihi res fuiſſet; attamen cum hodie orbis adeo ſit delicatus, neque ipſos inter eruditos conveniat; obſervationibus ſimpliciter inhærere meis, hisque materiam ſuppeditare volui, unde poſſet unusquisque, prout libuerit, conſiderationes inſtituere illasque ſecundum beneplacitum applicare: præterquam quod idem jam abunde fecerint alii, veluti Mouffetus, Godartus, Swammerdam, Blanckart, &c. Primam omnium Inſectorum metamorphoſin *Aurelias* ſeu *Nymphas*, ſecundam Erucarum *Papiliones*, qui diurni ſunt ſeu de die circumvolitant, nocturnos vero ſive noctu circumvolitantes cum Mouffeto *Phalænas* vocavi; ſecundam denique Acarorum & Vermium transformationem *Muscas* & *Apes* nuncupavi.

Plantarum nomina, quæ ab incolis atque Indis impoſita iis ſunt, retinui: Latina vero, aliaque cognomina in notis ſubjunxit Clariſſ. Casparus Commelin M. D. *Horti Medici Botanicus & Academiæ Cæſareo-Leopoldinæ Collega.*

Ubi vitam ſanitatemque conceſſerit Deus, obſervationes meas in Germania collectas, illis, quas in Friſia & Belgio annotavi, augere atque ſic illas Latino ac Belgico idiomate in lucem emittere decrevi. Vale.

Explanation of Plate 1st

The Ananas or Pine is the chief of all ye Eatable Fruits of ye Earth, and Justly deserves the first place in my Esteem & in this work; In this first Plate, I have drawn the Blossom, and the ripe Fruit in ye next; the small variegated leaves which grow close under the Fruit shine like Sattin, and are adorn'd with yellow spots; after the ripe Fruit is gather'd there grows young sprouts out of the sides of the Plant; the Leaves on ye outside are Willow green and the inside Grass green, the Edges are Red & Indented with sharp Teeth like a Sawe; what farther relates to this beautifull & delightfull Fruit is largely described by divers Learned Men, as Piso & Marcgrave, in Historia Brasilii, Reed in part 11, of Horti Malabar; Commelinus in part 1st of Hortus Amstelodam; and many others; I shall therefore (without farther delay) proceed to my observations on Insects, Of which those of ye greatest note in America are call'd in ye Dutch Language Kakkerlacs (ie, Cockroaches) which do very much harm to ye Inhabitants, both in their Cotton Manufactures, as in their Meats & Drinks, their common Food being any thing that is sweet, which makes them so much delight in this Plant; they lay their Eggs on a Heap, & make them up in a Bag, which resembles the European Spiders Web, when the Eggs are come to Maturity & ye Fœtus's are perfected, the Bag breaks & the young Cockroackes run out with extraordinary swiftness, & when they are no bigger than Ants, they without any difficulty get in at ye Chinks of our Closets, Box's & Chests, where they destroy & Eat up whatever is within them, and where they grow to ye bigness of one which I have drawn in this first figure, their Colour changing from brown to White, & lastly when they have Acquir'd their perfect bigness their Skin breaking on ye Back produces a Wing'd Cockroach soft and White, the Skin (which is white) retaining the form of ye Insect which was in it, On the other side of this Plate, I have placed another kind of Cockroach, which conceals the Eggs in a Little brown Bag under its Belly, & if it is touch'd it discontentedly leaves the Bag that it may more easily take its wings & fly away, from this Bag comes the Fœtus's which undergo the same Changes with the foredescribed large sort without any other alteration;

Annotations

The divers names by which different Authors have describ'd this Plant, you will find collected in my Flora Malab.a which were written since the twelve parts of Hortus Malabaricus.



EXPLICATIO FIGUR. I.

A*Nanas* inter omnes fructus terrarum edules facile princeps, merito etiam in hujus Operis Obſervationumque mearum ordine ducit agmen: florentem exhibet figura prima, qui in ſequenti maturus conſpiciendus erit. Parva ejuſdem variegata folia, quibus proxime inſidet fructus, rutilantis ſunt inſtar ſerici, flavis maculis ornati; tenera ad latus germina, poſtquam maturus decerptus eſt fructus, ulterius excreſcunt; folia oblonga exterius viridi ſed glauco, interius herbaceo ſunt colore, in margine quodammodo rubeſcentia, validis aculeis munita. Quod ad cætera pulcherrimum hunc ſuaviſſimumque fructum varii doctiſſimi Viri, veluti Piſo & Marcgravius in Hiſtor. Braſil. Reede in Part. XI. Horti Malabarici, Commelinus in Part. I. Horti Amſtelodam. ut & alii uberius deſcripſerunt; quamobrem ad meas de Inſectis Obſervationes progreſſura, circa illum non amplius morabor.

Inſectorum in America omnium notiſſima ſunt ita dictæ *Kakkerlacæ*, quod maxima ubique damnum & incommoda afferant incolis, horum lanificia & lintea devaſtando ac cibum potumque corrumpendo. Dulcia quæque communis ipſis ſunt eſca, qua de cauſa & hoc fructu tantopere delectantur. Acervatim ſua accumulant ſemina, quæ, perinde ac nonnullæ in noſtris regionibus faciunt araneæ, telâ in gyrum ductâ obtegunt. Ovulis maturitatem nactis, ac perfectis demum fœtibus, rodendo teſtas ovulorum frangunt ſummâque excurrunt celeritate tenellæ *Kakkerlacæ*, atque cum formicis majores non ſint, per rimas ſerrarumque clauſtra in thecas & ſcrinia nullo negotio penetrant, ubi corrodunt omnia atque depaſcunt. Tandem in illam augentur molem, quâ Tabula Prima iſtarum unam depictam ſiſtit, coloris è fuſco albicantis. Ubi perfectam denique acquiſiverunt magnitudinem, diſruptâ in dorſo pelle, alata prodit *Kakkerlaca*, mollis & alba, remanentibus exuviis, priſtinam inſecti formam inani cute mentientibus.

In oppoſito latere hujus fructus aliud quoddam *Kakkerlacarum* genus conſpicitur, quod ipſum in fuſco quodam ſacculo ſub ventre recondita gerit ſemina; verum hunc ſacculum tacta animalcula ſtatim dejectum linquunt, ut citius avolare fugamque capeſſere poſſint. Ex ſacculo fœtus proveniunt, qui eandem cum prædictis majoribus, ſine alio diſcrimine, ſubeunt metamorphoſin.

Diverſa, quibus planta hæc à diverſis Auctoribus inſignitur, nomina, collecta reperiuntur in Flora Malabarica mea, ſuper XII. Partes Horti Malabarici conſcripta.

EXPLICATIO FIGUR. II.

HIc *Ananas* eſt maturus, qui antequam comedatur, pelle ſua nudandus eſt, quippe hæc pollicem craſſitie adæquans ſi tenuior auferatur, fibrillas quasdam retinet inter edendum linguæ cum aliquo doloris ſenſu inhærentes. Guſtu fructus hic uvas, mala punica, ribeſia, poma atque pyra inter ſe miſta refert, omnium enim horum fructuum ſaporem quaſi in uno illo ſimul reperies. Odor ejus fortis eſt ac gratus, integrum conclave ſuavitate ſua replens, ſi diſſecetur fructus. Corona qua tegitur, item germina ad latus excreſcentia, terræ mandata, novas producunt plantas, quæ zizaniorum in modum læte creſcunt, tenui hujuſmodi germine ſpatium ſex menſium ad perfectam maturitatem nanciſcendam requirente. Tam crudus, quam coctus comeditur fructus; & quod inde ſive prælo ſive igne poteſt elici vinum ac ſpiritus ardens, utraque gratiſſimo ſapore alia id genus omnia ſuperant.

Eruca huic inſidens Ananæ anno 1701. à me in graminibus illi proximis reperta eſt, ſub initium menſis Maji: colore gaudet ſubviridi, atque per univerſam corporis longitudinem ſtria rubra & albicante inſignitur. Die Maji 10. in nympham transfigurata, ulteriùs die 18. Maji in elegantiſſimum mutabatur papilionem diurnum, flaveſcentem, pulchriter ſplendentibus viridibuſque maculis ornatum, qualis & in aëre volitans & fructui inſidens exhibetur.

In Corona hujus Ananæ rubicundus hæret vermiculus, tenuiſſimam nectens telam, cui parva involuta eſt nympha: ille ipſe vermiculus eſt, qui Coccinellam devorat; cujuſmodi plures non ſolum ipſa collegi, verum etiam inter Coccinellam ad noſtras regiones delatam invenire licet; veluti cuilibet novitatis avido in rei examine patebit. Supra telam nunc dictam iſtius vermiculi in corona fructus quædam hæret aurelia, in cujus aperta pelle reperi Coccinellam, quæ in ſummitate coronæ depicta exhibetur, nihilque aliud eſt, quam corpus binorum Scarabæorum, alterius volitantis, alterius ſedentis, qui in eâdem Tabula repræſentantur, nigricante alarum aliàs rubicundarum limbo. Atque hæc ad ornamentum Figuræ ſolum addidi, ex ſiccata enim Coccinella tantummodo collecta ſunt, neque ad metamorphoſes Americanas ſpectant: idemque ab aliis Naturæ curioſis obſervatoribus notatum eſt. Inter illos vid. Leuwenhoekius Epiſtol. 60. & 28. Novemb. 1687. pag. 141 uſque ad 144. item Blankardus de Inſectis pag. 215.

Quod ſi oculo per microſcopium armato papilionem aſpicias, farinaceus pulviſculus, quo obducuntur alæ, uti ſquamæ piſcium apparent; quælibet ſquamula tres quaſi dentes habet longioribus pilis inſtructos, omneſque eo ſunt ordine poſitæ, ut ſine magno labore numerari poſſent: at corpus ipſum plumis ſcatet interſitiſque pilis.



P. Sluyter sculp.

2

Explanation of Plate 2d

This is the ripe Pine, the Rind of which is pared off before the Fruit is Eaten and if it be gatherd while young, is about a thumbs breadth in Thickneſs, it contains certain small Fibres or Hairs which (if it be Eaten) leave a tingling Pain upon the Tongue, In this Fruit the Taste of ye Grape, ye Pomegranate, ye Gooseberry the Apple & the Pear are Mingled, yet so that each of them may be distinguish'd; the smell is gratefull in ye Highest degree; and when one of them is cut, it fills the whole Room with the Scent, The Crown which grows out at ye Top, & the Sprouts at ye sides (being set in ye Ground) produce new Plants, in as little time as Darnell, it not requiring above six Months to bring it to Perfection, it is Eaten either raw or Boil'd, & the Spirit is sometimes extracted by Preſsing & Distillation, and is (either way) of a most delicious taste exceeding any thing else of this kind;

This Caterpillar which is placed on ye Pine I first found upon the Graſs in the begining of May 1701 the colour was a Darkish green, Striated all ye length of its Body with Red & White, On the 10th of May it chang'd into a Chrysalis, & from thence on ye 18th into a beautifull Butterfly, which was yellow Elegantly spotted with shining green, which is drawn both Flying in ye Air & resting on ye Fruit; In the Crown of this Fruit is drawn a little Red Vermin, which Spins a thin Bag, & is chang'd into a small Chrysalis, this is that Vermin which devours the Cochineal or Coccinella, I have not only collected of these myself, but have also seen them brought among the Cochineal into these parts of ye World, as any inquirer after Novelties may observe, over the Bag of the abovemention'd Vermin I have drawn a Chrysalis sticking to ye Crown of ye Fruit, which when it cast its skin, I have observ'd to produce ye Cochineal, which I have here drawn it being ye Body of those Beetles, one of which is drawn Flying & the other resting on ye Crown, the Wings of them being Red Edged round with black; I have added this only to adorn ye Picture, for none but ye Dried Cochineals are preserv'd, & the Americans do not regard any other of their Changes and this is also taken notice of by other curious observers of the Works of Nature amongst the rest see Leuwenhoeks Epistle of Novr 28, 1684 from page 141 to 144, & Blankert de Insectis p:215 If you look at the Butterfly thro a Microscope the Powdery Dust with which the Wings are cover'd appears like ye Scales of Fishes, each of which has three Hairs like Teeth, & all of them are so placed that they may be easily counted, & the Body is all over cover'd with Feathers mix'd with Hairs.

Explanation of Plate 3d.

This Fruit is call'd at Surinam in the Dutch Language ye small Suursak the large sort being drawn in in the 14th Plate, they grow in ye form of a Tree, and bear vile, and almost useleſs Fruit, which on ye outside is yellow, and within is full of black seeds and a white Juice,

I found this fair green Caterpillar on this Tree in August 1700, & fed it with the leaves, till the 18th of the said Month, when it cast its skin & chang'd into a Scarlet Chrysalis, which on ye 12th of Septemr following, was again chang'd into a black & white Moth; this Moth has a double Proboscis, with which they suck the Honey from Flowers, for being like a small Tube it is very Proper for the receiving of Food, which being done they wind up the Proboscis so close among the Hairs that are under their Head, that it can scarcely be seen.

They enjoy a long Life and Fly only by Night; the Wings being look'd at thro' a Microscope, the small Dust which is on them, Appears like Cocks Feathers, variegated with several colours, as brown White & Black, the Body looks Hairy like a Bear (neither are the Hairs hid from ye Naked Eye) their Proboscis seems like the Wind Pipe of a Duck or Goose, and lastly their Feet & long Horns are a great Addition to their Beauty,

Annotations

Various Plants of this species are describ'd in the Book call'd Prodromus Paradisi Batavi, under the name of Anona, & also in the 3d part of Hortus Mal.s under the Title of Anona Marans et Attamarans; & the seeds of divers Species of them being brought one year into Holland, the three that differ'd most in bigneſs were cultivated in ye Garden at Amsterdam.



J. Mulder. Sculp.

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EXPLICATIO FIGUR. III.

HIc fructus in regione Surinamenſi Parvum *Suurſak* vocatur Belgico idiomate, perinde uti Magnum Icone XIV. exhibebitur. Arborum creſcunt modo, vilem ac fere inutilem gerentes fructum, qui exterius flaveſcit, interius nigris ſeminibus medullâque albâ repletus eſt.

Reperi in hac arbore anno 1700 menſe Auguſto pulchram iſtam viridemque Erucam, quæ foliis illius nutrita uſque ad diem 18 Auguſti, depoſitis exuviis in nympham punicei coloris mutabatur; hæc vero die Septembris 12. in nigricantem iſtiusmodi albicantemque papilionem nocturnum rurſus tranſibat. Duplici ſunt inſtructi proboſcide hi papiliones, quam mel ex floribus ſucturi ita componunt, ut unica veluti formetur fiſtula, pabulo transmittendo apta, quo peracto proboſcidem in arctum convolutam ita ſub capite inter pilos recondunt, ut vix inveniri rurſus queat. Aliàs noctu ſolum circumvolitant, vitaque gaudent ſatis tenaci. Microſcopio adhibito, alarum pulvisculus plumas gallinarum variegatas coloris fuſci, albi & nigri repræſentat: corpus ipſum urſi inſtar hirſutum eſt, neque oculo à pilis immuni: proboſcidem anatis ſive anſeris tracheam eſſe diceres: pedes denique & antennæ tanquam longe pulcherrimum papilionis ornamentum apparent.

Hujus plantæ ſpecies variæ in Prodromo Paradiſi Batavi ſub nomine Anona *proponuntur, perinde ac in Horti Malabar. Part. III. ſub titulo* Anona marans & Attamarans. *Ex America in Belgium diverſarum* Anonæ *ſpecierum quotannis transmittuntur ſemina; earumque tres in Horto Amſtelodamenſi coluntur, præſertim magnitudine inter ſe diſcrepantes.*

EXPLICATIO FIGUR. IV.

PLanta hæc in America *Manihot* & *Manyot*, atque panis quem ex ipſius radice conficiunt, *Caſſava* nuncupatur. Octo vel novem pedum altitudine creſcit herba, trunco ſive caule rubicundo; eademque ut late multumque propagetur, in fruſta longitudine palmæ conſcinditur caulis, quæ terræ mandata, perinde ac fit de ſacchari arundine, poſt anni ſpatium aptam dant radicem pro pane inde conflando, veluti in ſequenti Figura V. conſpici poteſt.

Spadiceam hanc piloſamque erucam Anno 1700. menſe Junio in herba reperi, ejuſdem folia depaſcentem, quibuſcum etiam ad diem 12. Junii porro inſectum alui: tum in nympham mutabatur, qualis in uno foliorum hæret. Exin die 1. Julii hujusmodi papilio fuſcis albicantibuſque maculis adſperſus producebatur: cujus generis in agris *Caſſava Domini de Vreedenburg* ingentem copiam circumvolitantem conſpexi, ubi hanc quoque obſervavi metamorphoſin.

Ad ornatum Figuræ cauli plantæ adhuc impoſui animalculum, quod vocatur *Sauvegard*, atque progreſſu temporis Crocodili magnitudinem decem vel duodecim pedum nanciſcitur. Cadavera pro paſtu ipſi inſerviunt, vivos tamen homines inſtar Crocodili non aggreditur. Cum ova ponit, ſingulari Naturæ ſolertia in fluviorum ripis excavat arenam prius fœmina, ibique à ſolis æſtu poſtmodum excluduntur ova. Hæc ipſa quoque Indorum cibus ſunt; magnitudine adæquant ova gallinarum, quas nobis attulit Calicutia, niſi quod paulo ſint oblongiora. Amphibium eſt, tam in terra, quam ſub aquis vivens animal, ideoque ſi deficiant cadavera vel piſces, formicis vel muſcis etiam veſcitur. Quod ſi hoc de Inſectis opus brevi diſtributum iri atque curioſis Lectoribus non ingratum fore animadvertero, forſan de animalibus iſtiusmodi integer Tractatus ſequetur.

Variæ ſunt plantæ, ex quarum radice in America panem conficiunt incolæ: uti ex Jucca foliis Aloës, *teſtante in Horto Farneſiano Aldino: ex ſpecie quadam* Ari, *de quo ſcripſi in Præludiis meis Botanicis. Communicaverat mecum illud* Arum *Clar. Naſſi, adjuncto, ex illius radice panem formare Indos: creſcitque adhuc dum in Horto Medico Amſtelodamenſi planta. Verum hoc* Manihot *videtur illud eſſe plantæ genus, quod omnium plurimum in India Occidentali præbet panem. Diverſis gaudet cognominibus: ita vocatur* Manihot Theveti, Jucca & Caſſavi J. B. Hiucca ſive Mandioca ex qua Caſſavi Parkinſ. Manihot Indorum ſive Jucca foliis Cannabinis C. B. Pin. Ricinus minor, viticis obtuſo folio, caule verrucoſo, flore pentapetalo, albido, ex cujus radice tuberoſa ſucco venenato turgida Americani panem conficiunt. Sloan. Catal. Plant. Jamaic.



Explanation of Plate 4th

This American Plant is call'd Manihot & Manyot, and the Bread which is made of the Root is call'd Caſsava, it grows to 8 or 9 Feet in Hight, the Stalk or Stem is Red; it is very easily Propagated for a Slip (growing out of ye Stem) being cut off, about a Span long & set in the Ground (as they do ye Sugar Cane) will in a years space have a Root fit to make Bread off, the manner of which may be seen in ye following 5th Plate; I found this red Hairy Caterpillar on this Herb Eating ye Leaves in June 1700, and fed it with them till ye 12th of that Month, when it was chang'd into a Chrysalis which sticks upon one of ye Leaves, & from which on ye 1st of July came this Butterfly spotted with brown and White; of this kind I have seen vast numbers flying about the Caſsava Fields of M: de Vreedenburg, where I also observ'd their Metamorphosis I have plac'd this small Animal on the Stem to beautify the Picture, it is call'd a Sauvegard, & in time grows as big as a Crocodile of 10 or 12 Feet long, it preys upon any Dead Carcaſs, but will not set upon Living Men, which the Crocodile will, the Female before she lays her Eggs, makes (by a wonderfull Instinct of Nature) a Nest on ye Bank of some River & there the young ones are soon after Hatch'd by ye Heat of the Sun; Those Young Ones ye Indians Eat, the Egg is about the bigneſs of a Calicut Hen, but something more oblong; they are Amphibious Animals, Living either on Land or in the Water, & if they miſs their Prey both of Carcaſs's & Fishes they will feed upon Ants and Flies. If I find that this Work soon disperses, & is not unacceptable to ye Curious who reads it, I may Perhaps Publish an intire Tract concerning these kind of Animals.

Annotations

There are various Plants of the Roots of which the Inhabitants make Bread in America, as of the Jucca foliis Aloes, which grows in ye Garden of Farnisianus Aldinus; of a species of ye Aron or Wake Robin of which I have written in ye Supplement to my Herbal; the renown'd Naſsus communicated to me that kind of Arum which is there subjoin'd (& of whose Root the Indians make Bread) it now grows in the Physick Garden at Amsterdam. — The Manihot here describ'd is that kind of which the West Indians make the most part of their Bread, it has divers other names, being call'd by J: B: Manihot Theveti Jucca & Caſsavi, by Parkins Hiucca sive Mandioca ex qua Caſsavi, by C: B: Maniot Indorum sive Jucca follis Cannabinis, & by Sloane in Catal: Plant Jamaic: Pin Ricinus minor viticis obtuso folio Caule verrucoso Flore Pentapetalo Albido ex cujus radice tuberosa succo venenato turgida Americani panem conficiunt.

Explanation of Plate 5th

This is call'd ye Caſsava Root of which they make Bread in America which both the Natives & Europeans residing there Eat, with their Meat, but the first thing which they do in making of it is to Scrape the Root & preſs all the Juice out, It being Mortal Poison, after which it is laid upon thin Iron Plates (like those which in Holland are made use of in Building of Houses) and underneath they kindle a Slow Fire; by which means the rest of ye Moisture Exhales out; lastly it is made into a Cake which both in Figure & Taste resembles the finest Biskets which are made in Holland, but if either Man or Beast drink of the raw Juice which is Preſs'd out, they Die with intolerable Torments, & yet the same Juice when it is Boil'd becomes an extraordinary good and wholesome Drink. This large black Caterpillar was exceeding hurtfull to this Plant all the time I was at Surinam; it destroy'd even whole Fields of that which should have been for the Service of Man, its Head & hinder parts was a Sanguine colour, the Body being Striated with black & Yellow. in Decr 1700 it cast the skin & changed into a brown Chrysalis, from which a Month after came this Moth, which was most Elegantly variegated with black & white, the Body being spotted with Orange colour;

This Serpent (which I placed here the more to adorn the Picture) is naturally very beautifully [wreathed &] spotted, the big part of the Belly contains such Eggs as these which I have drawn on ye Caſsava Root, they not being like those of Birds, but like ye Eggs of ye Crocodile, Tortoise or of the Animal call'd Sauvegard, being of an oblong round & cover'd with a skin spotted like Sky colour. —


J. Mulder Sculp

EXPLICATIO FIGUR. V.

C*Aſſava* radix hæc nuncupatur, unde panis conficitur, communis Indorum Europæorumque in America cibus. Et primum quidem ex corraſa radice ſuccus omnis exprimitur, cum iſte admodum ſit venenatus; dein radix expreſſa ferreæ imponitur laminæ, quali in noſtris regionibus pileorum ſtructores utuntur, & lenis huic laminæ ſupponitur ignis, ut quicquid ſupereſt humiditatis, probe exhalare poſſit; ſic denique in maſſam quandam coit, quæ figura & ſapore optimum Belgarum panem biscoctum refert. Quod ſi ab homine vel bruto expreſſus ſuccus bibatur, cum maximis cruciatibus ei moriendum eſt; coctus autem idem ſuccus optimum præbet neque noxium potum.

Magna nigricanſque eruca, cujus & caput & pars poſterior colore ſanguineo, integrum vero corpus nigris & flavis inſignitur ſtriis, ingens meo tempore in Surinamenſium terra huic plantæ noxa erat; totos enim eâdem conſitos depaſcebat agros, hominum nutritioni deſtinatos. Menſe Decembri, Anni 1700. depoſita pelle in fuſcam ejusmodi transivit nympham, quæ quatuor ſeptimanis poſt in papilionem hanc nocturnam, ſeu phalænam ex albo nigroque elegantiſſime variegatam, & maculis in corpore aurantii coloris inſignitam, degeneravit.

Appoſui ad ornandam magis Tabulam Serpentem, quæ naturâ ita contorta pulcherrimeque maculata, tumido ventre indicat, ova in illo contineri, iſtius generis, quam in radice Caſſavæ cernuntur. Ova hæc non ut avium, teſtâ, verum eodem modo ut ova Crocodilorum & animalium quæ vocantur *Sauvegardes*, ſive etiam teſtudinum, cute quadam cœruleis hinc inde notata maculis obducta ſunt, ex oblongo rotunda.

EXPLICATIO FIGUR. VI.

CArduus hic, in America *Maccai* vocatus, ad quatuor ulnarum excreſcit altitudinem; florem profert album flavis ſtaminibus in medio ornatum: baccas gerit flaveſcentes ac rubicundas, quibus tam homines, quam aves veſcuntur. Truncus adeo tandem evadit magnus ac durus, ut ſecuri opus ſit ad eundem recidendum.

Rubicunda flavisque inſignita ſtriis, quæ cernitur in ſummitate eruca, longioribus, renitentibus ac fuſcis pilis obſita eſt; foliis hujus cardui paſcitur. Die 4. Auguſti Anni 1700. apud me, depoſitis prius, more omnium erucarum, ſuis exuviis, in nympham abiit, telæ cuidam lignei coloris ſe ipſam involventem; unde poſtmodum die 30. Auguſti elegans producta eſt phalæna.

Inferior eruca flava eſt, atris notata maculis, piliſque oblongis onuſta. Mirum hoc eſt inſectorum genus, quod ingenti acervo ita congregatur, ut capite unius caudæ alterius annexo quaſi circulum efforment, quem ſi disjectis quibusdam rumpas, ſtatim rurſus inſtar Mercurii vivi in unum coëunt. Carduus iſte pro eſca illis inſervit, die 20. Julii anni 1700. tela nexa ſemet obduxerunt, atque hinc die 24. Septembris primus papilio nocturnus prodiit.

Uterque hic papilio microſcopii ope conſpectus fere pellem refert urſi Hungarici, adeo hirſuti ambo & fœdi apparent, pilis inſtar ariſtarum hordei deformes, qui alias oculo non armato elegantiſſimi videbantur. Obſervavi, omnes nocturnos papiliones pilis, diurnos plumis, papilionesque transparentes & vitreos ſquamis obſitos eſſe.

Hæc planta eſt Juripeba Piſonis *&* Cheru-Chunda *in Parte II. Horti Malabar. deſcripta ac depicta. Diverſa ipſius cognomina in Flora Malabar. mea collecta inveniuntur ſub titulo*, **Solanum** Indicum ſpinoſum, fructu minimo miniato, glabro, Raji.



J. Mulder Sculp.

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Explanation of Plate 6th.

This Thistle is call'd in America Maccai, it grows to 4. Ells in Hight & bears White Flowers adorn'd with yellow Cheives in the Middle, it bears reddish yellow Berries which are Eaten both by Men & Birds, the Stem of it is so hard that it cannot be cut down without an Axe;
The uppermost of these Caterpillars is red Striated with yellow; it is cover'd with long brown & Bristly Hairs, & fed upon the leaves of this Thistle; That which I kept cast its Skin on ye 4th of Augt 1700, (after the manner of all Caterpillars) and changed into a Chrysalis having Spun itself up in a brown Bag, from which (on ye 30th Day of ye same Month) came an Elegant Moth;
The lower Caterpillar is yellow spotted with black & red cover'd with long Hairs, this kind of Caterpillars have this particular very wonderfull, that when they roll themselves up of a Heap, their Head and Tail Joins together which makes them lie in a Circle, & if you pull them asunder they run together again like Quicksilver, it feeds on this Thistle & on ye 20th July 1700 it Spun up in a Bag from which on ye 24th Septr following came the Lowermost Moth; either of these moths being veiw'd thro' a Microscope, looks like the Skin of an Hungarian Bear, Hairy & Filthy, their Hairs looking like deform'd Ears of Barley tho to ye Naked Eye they appear Exceeding beautifull, I have observ'd that all Moths are cover'd with Hairs, and Butterflies with Feathers & those that are transparent like Glass, with Scales,

Annotations

This Plant is ye Juripeba of Piso, and the Cheru Chunda describ'd & drawn in part 2. of Hort. Malab. its many Additional names are collected in my Flora Mal. under ye Title of Solanum Indicum Spinosum &c —

Explanation of Plate 7th

The American Curasa which I have here drawn is not to be compar'd with ours in Europe for goodneſs & Taste neither are the Trees (which bear Red & White Flowers) bigger than a Cherry Tree of Holland or Germany, nevertheleſs ye Stem would be Stronger and the Fruit better if it were set in a good Soil, and where ye Ground is not kept Poor by the Covetousneſs of the Inhabitants I found only two Caterpillars on this Tree one of which died, the other was on ye 20th of April chang'd into a Green Chrysalis, and on ye 26th of May following into this large and most beautifull Butterfly



P. Sluyter, Sculp.

EXPLICATIO FIGUR. VII.

C*Araſa Americana*, quæ hic exhibui, noſtris in Europa ſapore haud æquiparanda ſunt: neque arbores etiam, quæ flore gaudent albo rubroque, magnitudinem ceraſorum vel in Belgio vel in Germania excedunt. Melioris tamen forte notæ ac perfectioris coli poſſet fructus, ſi terram gens magis aſſueta labori, & quæſtus minus avida inhabitaret.

Binas ſolum hujuſmodi flaveſcentes reperi erucas, quarum altera mortua eſt, altera die 20. Aprilis in viridem aureliam transfigurata, poſtmodum die 26. Maji in tam pulchrum magnumque papilionem mutata eſt.

EXPLICATIO FIGUR. VIII.

J*Aſminum Indicum*, ita vocatum in America, in proceram arborem excreſcit; fl
res fert ponderoſos & denſos, odoris longe ſuaviſſimi; Folia viridia itidem ſu
craſſa & ſucculenta; ubi ramulum decerpſeris, lacteus effluit liquor. Facillin
propagatur; modo ramum decerptum terræ mandaveris, antequam lacteus humor
effuſus, iſte paucorum menſium ſpatio magna arbor evadet.

Fronde Jaſminorum veſcitur coronata hæc eruca, quæ die 20. Septembris in nyı
pham, atque exin die 11. Octobris in elegantem hujuſmodi & undulatum quaſi p
pilionem abiit, exterius ſex ordine maculis albis in utraque ala notatum, interius
atro rubroque inſignitum. Ubi oculis microſcopio munitis animalculum contempl
tus fueris, admiranda ejus Tibi apparebit pulchritudo, digna quæ intentius adſ
ciatur, cum verbis eadem deſcribi aut exprimi nequeat.

Hanc arborem Hernandes in Hiſtor. ſua Mexicana cap. 33. *nomine* Quauthlepatli, *ſive* Arbor Ignea, *deſcribit : ſicut etiam in Part. II. Hort. Amſtelodam. cap. XXIV. ſub titulo* Apocynum Americanum fruteſcens, longiſſimo folio, flore albo odorato, *proponitur.*



P. Sluyter Sculp.

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Explanation of Plate 8th

The Tree which is call'd ye Indian Jasmine grows to a very great Hight in America; it bears thick & Heavy Flowers of a very delightfull Odour, the green Leaves also are heavy & full of Juice, and if you break off a Twigg a Milky Liquor Drops out; it is easily Propagated, for a Slip being cut off and set in ye Ground before ye Juice drops out will in a few Months grow to a great Tree. — On the Boughs of ye Jasmine feeds this Caterpillar which has a Coronet upon its Head, on ye 20th of Septr it chang'd into a Chrysalis, out of which Octbr 11th came this Elegantly Waved Butterfly, having on each upper Wing 6 White Spots, & the under one Spotted with black & red; if you look at this Butterfly thro a Microscope, it appears most admirably beautifull, & more worthy to be attentively consider'd than to be expreſsd or describ'd by words

Annotations

Hernandes in his History of Mexico, has describ'd this Tree by ye name of Quauthlepatli; or Arbor Ignea; it is also spoken of in part 2d Cap 24th of Hortus Amstelodam under the Title of Apocynum Americanum Fruteſcens Longiſsimo folio flore albo odorato.

Explanation of Plate 9th

The Pomegranate Tree with the Flowers and Fruit grows without cultivation in the Fields at Surinam; therefore ye Inhabitants do not mind the improvement of it; but this Tree is so well known in Europe, that I shall not Persist in a longer description of it; — This Yellow Caterpillar I fed on the Leaves of ye Pomegranate at Surinam, till on ye 22^{d} of April (sticking to ye Tree) it chang'd into a grey Chrysalis, from which May 8th came this most exceedingly beautifull Butterfly, tinctur'd with Silver & Sky colour; Edged with brown & mark'd with Half moon Circles; the under side being Scarlet Spotted with yellow. This Insect is very swift of Flight,

The Microscope being taken into use, this Sky colour'd Butterfly, looks exactly of the same colour as the Thatch which covers Roofs of Houses, the Feathers on y^{e} Sides being so beautifull & placed in such Elegant Order that they look like Peacocks Tails, and of such dazling colours as deserve to be diligently contemplated, it not being Poſsible to describe them by Pen or Pencil.



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EXPLICATIO FIGUR. IX.

GRanata Arbor cum flore & fructu libenter quidem in agro Surinamenſi creſcit, parum tamen ab Incolis colitur. Quandoquidem in Europa etiam ſatis nota jam eſt, in illa largius deſcribenda non perſiſtam.

Flavam hanc erucam in regione Surinamenſi foliis Granatæ nutrivi, uſque dum die 22. Aprilis fixa hærens in cinerei coloris nympham, & ex eâ poſtmodum die 8. Maji in papilionem hunc venuſtiſſimum mutaretur; qui ex argenteo cœruleoque tinctus, margine fuſco circumdatus, circulisque ſemilunaribus inſignis eſt, adſperſis in latere oppoſito, quod puniceum, maculis flaveſcentibus. Maxima gaudet velocitate, quando circumvolat inſectum.

Microſcopio in uſum vocato, cœruleus hic papilio tegulas ejuſdem coloris, uti tectis inſtratæ jacent, exacte refert; adeo eleganti & concinno ordine latiores quædam plumæ, quales ſunt pavonum, alis impoſitæ videntur, quæ tanto inſuper ſplendore fulgent, ut diligentem ille contemplationem prorſus mereatur, quippe cum non poſſit vel calamo exponi vel ſcripto explicari.

EXPLICATIO FIGUR. X.

Xylon arboreum Surinamenſe cito excreſcit, atque tempore ſex menſium è ſemine in arborem, altitudine mali cydoneæ noſtratis æmulam, elevatur. Foliis virentibus ad vulnera refrigeranda & ſananda utuntur Indi. Flores gerit duplices, & rubicundos & ſulphureos, rubicundi ſteriles ſunt ac fructum nullum dant, ſulphurei goſſypium proferunt. Scilicet poſt florem ſequitur capitulum, iſtius loco progerminans, quod ipſum ubi ſuam nactum eſt maturitatem, fuſcum evadit atque dehiscens albiſſimum goſſypium exhibet, tribus conſtans partibus, quarum quælibet nigricans ſemen continet, cui goſſypium adhæret. Ex hoc goſſypio fila ducunt, telasque conficiunt pro lectis pendulis, in quos ad quietem ſe componant, Indi.

Duplicis generis erucam hæc arbor mihi exhibuit: inferiorem nigricantem ad diem uſque 20. Martii viridi ejuſdem fronde alui; tum vero depoſitis exuviis in aureliam mutata eſt, ex qua die 28. Aprilis 1701. phalæna colore goſſypium referens producta eſt.

Superior albicans pariter foliis hujus arboris paſcitur. Hæc die 9. Junii in nympham transformata, exin die 24. Julii facta eſt papilio, argenteis puniceiſque maculis ſuperbiens.

Prior albicans phalæna ſi ope microſcopii conſpiciatur, tanquam ex albis nigrisque plumis, quæ tamen ad pilos magis accedunt, videtur eſſe conflata, binis ejus corniculis binos ſerpentes ex albo nigroque variegatos referentibus.

Alter autem iſte papiliunculus in dorſo copioſam gerit plumam, ſubtus exiguas quasdam protuberantias coloribus longe pulcherrimis tinctas, plumarum enim quaſi ſunt elevati faſciculi, rubente, coeruleo, purpureo, aureo argenteoque colore ſuaves, qualis eſt pavonum pluma. Extremitates alarum ad caudam eminentes pariter elegantiſſimæ ſunt plumarum criſtæ; antennæ binos repræſentant atros ſerpentes.

Xylon arboreum *duplici flore gaudere, primus Hermannus in Horto Lugdunenſi obſervavit, unde tanquam binas ſpecies diverſas arboris illud proponit; quem ſecutus eſt in Inſtitut. Rei Herbar. Tournefortius. Verum ſecundum hanc Autoris noſtræ deſcriptionem duplices iſti flores in una eademque arbore reperiuntur, hoc tantum cum diſcrimine, ut capſulæ ſeminales nullæ poſt rubicundum, ſed ſolummodo poſt florem flavum, ſequantur. Prior ſub nomine* Xylon arboreum *J. B. poſterior ut* Xylon arboreum flore flavo *à Tournefortio proponitur, ubi & aliæ denominationes ejusdem exhibentur.*



P. Sluyter Sculp. 15

Explanation of Plate 10th

This Tree which is calld Xylon, grows in a short time at Surinam, for in the Space of 6 Months after the Seed is Sown, it grows as big as an European Quince Tree; the Indians use the leaves for the cooling & Healing of wounds, They bear both Red & yellow or sulphur colourd Flowers, the Red Flowers are barren and bear no Fruit, but the yellow ones produce Cotton, in this manner; after ye Flowers drop off, a Head of Seed follows in their Room, which when it comes to Maturity (it being coverd with a brown Skin) bursts open & discovers the white Cotton which is divided into 3 parts in one of which is black Seeds, which Stick to the Cotton, This Cotton the Indians Spin into thread, & make the Hammocks of in which they Sleep; — I found two Caterpillars on this Tree, the lowermost, (which was black) I fed with green Boughs off it, till ye 20th March, when it cast its skin & changed into a Chrysalis, & from thence on ye 28th of April into a Moth of colour resembling Cotton The upper Caterpillar (inclining to white) fed also on ye Leaves of this Tree, till on June 9th it was changd into a Chrysalis & from thence, July 24th into a Butterfly beautifully spotted with Scarlet & Silver; If you look at ye first Moth by the help of a Microscope, the black & white Feathers seemd to be Joind together close tho they are abundantly bigger than Hairs, The two Horns represent two Serpents wreath'd with white and black;

The other Butterfly has a large Feather on the Back & several small Protuberances underneath of beautifull colours, some of ye Feathers on ye Back stand upright and are red, Sky colour, Purple, Gold & Silver like a Peacocks Tail, The Edge of the Wings are likewise adornd (towards the hinder part) with many most Elegant Plumes of Feathers, the two Horns representing two black Serpents,

Annotations

Hermannus's Hortus Lugdunensis, is the first Book that takes notice that ye Xylon bears two kinds of Flowers, yet He there speaks of two species of ye Tree This is followd by Tournefort in Inst: rei: Herb: but according to our Author the same Tree bears both the kinds of Flowers (Viz) Red & Sulphur colourd, but with this difference that after the Red there follows no Cotton, but only after the Yellow; it was first calld Xylon Arboreum by J: B: & afterwards Xylon Arboreum Flore Flavo by Tournefort, who has likewise collected all its other names —

Explanation of Plate 11th

This is ye Bough of a Tree call'd in ye Dutch Language Ballisaden Booms of which (being Split) they make Planks in America; wherewith they build their Houses or Huts, setting four Beams in the four Corners as Props or Fulciments to these Boards; This Tree bears yellow Flowers which are so thick & heavy that they weigh the Boughs down, which rise up again when they fall off, The Heads of Seeds are like Brushes, in ye stead of which the Inhabitants use them, they are full of Seeds which resemble Millet both in shape and bigneſs;

The species of Caterpillar which you here see is yellow striated with black & Armed with six spikes, it infests this Plant three times in a year, when it is come to a third part of its bigneſs it casts its Skin & becomes of an Orange colour, having a black spot between each Joint, but the six spikes remain as before a few Days afterwards it cast the skin again & became without Spikes; On y^e^ 14th of April it chang'd into a Chrysalis, & from thence on y^e^ 12 June into the Moths here drawn, of which the lower & smaller is the Male, the upper and larger is the Female.



EXPLICATIO FIGUR. XI.

HIc ramus eſt arboris Surinamenſis Belgico idiomate *Palliſaden-Boom* vocatæ, ex qua fiſſa aſſeres conficiunt; quibus in America utuntur ad domus ſuas vel caſas exſtruendas, quatuor trabibus ad quatuor angulos in terram defixis pro aſſerum fulcimento. Florem gerit arbor flaveſcentem, denſum vero & ponderoſum, adeo ut poſt eundem deciduum in altum rurſus erigatur ramus, unde propendebat. Capſulæ ſeminales ſunt inſtar ſcoparum, cui etiam inſerviunt uſui apud incolas; ſcatent ſeminibus, figura & magnitudine ſemina milii referentibus.

Quod cernis erucarum genus, flaveſcens, nigris notatum ſtriis, & ſex ſpiculis armatum, ter hanc arborem ſingulis annis infeſtat, Cum ad magnitudinis ſuæ tertiam acceſſerunt partem, deponunt exuvias atque aurantium nanciſcuntur colorem, ſingulis ſegmentis nigricante rotundaque macula conſpicuis; ſex item ſpiculis ut antea muniuntur: verum paucos dies poſt, iterum mutata pelle, ſpiculis inermes apparent. Anno 1700. d. 14. Aprilis ex erucis mihi factæ ſunt nymphæ, quæ d. 12. Junii in appoſitas phalænas tranſierunt. Inferior ex his & minor mas, ſuperior & major fœmina eſt.

EXPLICATIO FIGUR. XII.

B*Anana* hic fructus in America vocatus, loco pomorum inſervit, grati quippe ſaporis, perinde ac in Belgio poma, & coctus pariter atque crudus ſuavis eſt. Cum maturus nondum evaſit, ex albo flaveſcit, maturus citrino extus & intus colore tinctus eſt, cortice craſſiore inſtar citri munitus. More racemorum pendet fructus, qualibet arbore unicum ſolummodo proferente racemum, qui 9 vel 10 habet circulos, horum autem ſinguli 12. vel 14. gerunt fructus, omnes ſurſum ſpectantes. Ejuſmodi racemus tantæ eſt magnitudinis, quantæ aliquis ferendo par eſſe poteſt. Florida ſimul cum fructu eſt abor, flore elegantiſſimo apparente, qui conſtat ex quinque foliis corii adinſtar craſſis, coloris quidem ſangvinei, ex oppoſito autem latere quaſi rore coeruleo onuſtis. Arbor ceu braſſica ſpongioſa eſt, truncus folioſus & ex variis conflatus tegumentis, quæque erumpunt germina, ſex menſium ſpatio in 13. pedum altitudinem excreſcunt, & craſſitiem proportione habita malo craſſiori navium parem. Folia ſeptem pedibus longiora, dimidioque latiora ſunt, ſuaviter livideſcentia; pani eadem ſubſternunt incolæ, quo poſſint commode illum clibano ingerere.

Erucam ex albo livideſcentem in arbore iſta reperi, cujus etiam foliis à me ad diem 21. Aprilis nutrita fuit, cum ſepoſitis exuviis in nympham abiit, poſtmodum die 10. Maji in pulchram hanc phalænam mutata.

Planta hæc eſt Muſa Serapionis, *tot diſtinctis inſignita nominibus, quot de illa ſcripſerunt Auctores. Omnia hæc nomina congregata, in* Flora Malabarica *mea ſub nomine* Ficoïdes ſeu Ficus Indica, longiſſimo latiſſimoque folio, fructu longiſſimo, Muſa Serapionis dicta *Herm. Cat. propoſita invenies.*



P. Sluyter Sculp

Explanation of Plate 12th

The Fruit which is here drawn is call'd in America Banana, & serves in y^e^ Place of Apples, Tasting like y^e^ Apples in Holland, & is good both raw & Boil'd, before it is ripe it is of a Pale Yellow, but when it is come to Maturity it is both within & without of a Citron colour, & has a Thicker Rind than the Citron; the Fruit Hangs like a Bunch of Grapes from the Tree, each Tree having but one Bough, which has Nine or Ten Circles, & each Circle twelve or Fourteen of ye Fruit all Looking upwards; This Bough is of so great a bigness that it is as much as any one Person can carry, it bears Flowers and Fruit at ye same time, ye Flowers have a Beautifull Look, & consist of five thick Leaves like ye Corion, it is of a Blood Colour, & cover'd on the other Side with a Gloomy Sky colour, the Tree is Spongy, the Trunk being compos'd of many folds of Leaves, blended together, from which ye Sprouts do come; In six months time it grows to 13 Feet in Hight, & as thick as ye Mast of a Ship, the Leaves are above 7 Feet long, & Half as Broad, of a beautifull Green, ye Inhabitants lay their Bread upon them, the more easily to put it into their Ovens; — I found this green & white Caterpillar on this Tree, with the Leaves of which I fed it, till on ye 21st April it changed into a Chrysalis, and from thence May 10th into this beautifull Moth,

Annotations

This Plant is ye Musa Serapionis to which all ye Authors who have written of it have given a new Name, all which are collected in my Flora Malab^a^ under the Title of the Ficoides Seu Ficus India Longissimo Latissimoque folio fructu longissimo, which Hermannus has call'd Musa Serapionis.

Explanation of Plate 13th

This is a Bough of ye American Plumbs, which grow to as great a Hight as ye Wall Nut Trees of Holland, & bear almost the same Proportion in thickneſs, the Leaves and Flowers are about as big as those of the Common Elder, but the Bloſsoms are not so sweet, the Fruit Hangs down from ye Tree like bunches of Grapes, tho it grows wild, for they are never cultivated, The Europeans at that place, never Planting or taking care of any thing but the Sugar Cane; This Fruit is Astringent, and moves sweet, and like the Fruit that causes it is of a yellow colour,

The Green & Hairy Caterpillars which Creep about the Flowers, delight abundantly in them, but in defect of them, will Feed upon the Boughs, they are of such a Sloathfull Nature, that they will not stir all Day long except it be for Food, the 5th of April they became fixed, & on y^e 7th chang'd into Chrysalis's which stuck to y^e Tree, & on y^e 20th following produced Sky colourd Butterflies



D. Stoopendaal Sculp.

13

EXPLICATIO FIGUR. XIII.

HIc ramus exhibetur *Pruni* Americanæ, quæ in tantam excreſcit altitudinem, quantam in Belgio Nux Juglans attingit, ejuſdemque habita proportione fere eſt craſſitiei; foliis & floribus maxime ad Sambucum vulgarem accedit, præterquam quod flos odore careat. Fructus racemorum inſtar pendet ex arbore, quæ tamen ſponte creſcit, neque inſeritur; cum in iſtis regionibus Europæi præter Arundinem Sacchariferam nihil colant. Adſtringit fructus atque movet ſudorem, qui perinde ac fructus, à quo prolicitur, flavo tinctus eſt colore. Quod in pruno continetur oſſiculum, dimidiam illius conſtituit partem; caro fructus eſt admodum fibroſa.

Virides & ſpinoſæ erucæ floribus irrepentes, iisdem ſumme delectantur; eorum autem defectu fronde arboris paſcuntur, naturâ ſegnes, totam diem non niſi pabulo ſe replent. Die 5. Aprilis quietæ hærebant firmius, atque die 7. in nymphas defiguratæ, poſtmodum die 20. ejuſdem menſis coerulei tales facti ſunt papiliones.

EXPLICATIO FIGUR. XIV.

HIc ramus eſt proceræ arboris, quæ à fructu in America Belgice *Zuurſak* vocatur. Folia ejus pulchriori, quam citri arboris folia, ſunt tincta viridi; flores è flavo virideſcunt, petalis craſſis inſtructi. Fructus meloni fere ſimilis, inſtar uvarum ſapit acidiuſculum, duriori pelle cinctus: caro ejus alba, mollis, gratisſimique eſt ſaporis, tam cocta, quam cruda edulis. Antequam vero matureſcat, coquendus eſt, quando cum aqua & ſaccharo coctus cibum præbet non contemnendum. In Barbados Inſulis vinum quoque è fructu hoc exprimitur.

Frons hujus arboris virens eſca fuit magnæ iſtius & virideſcentis erucæ, quæ die 22. Junii immota jacuit, exuvias depoſuit & in nympham degeneravit, unde Augusti die 23. phalæna ſpadiceo tincta colore producta eſt.

Flaveſcens autem erucula, circumvoluta ramulo inhærens, pariter hujus arboris fronde veſcitur. Die 3. Decemb. telam lignei coloris compoſuit, ex qua die 24. Januarii phalæna albicans erupit, qualis folio arboris impoſita cernitur.

Minor hujus arboris ſpecies, quam Belgice Zuurzak *vocant, jam tum Figura III. exhibetur; uti etiam ſub nomine* Anonæ *in hortis Belgicis eandem eſſe cognitam, folio 3. jam dictum fuit.*



Explanation of Plate 14th.

This is the Bough of a Tall Tree, which (from the is calld in America by yᵉ Dutch name of Zuursak), its Leaves are of Fairer green than those of yᵉ Citron; the Flowers are yellow & have thick Leaves, the Fruit almost resembles a Mellon and has a little Acid Taste like Grapes; it has a Very hard rind, the Pulp is White soft and of a Delicious Taste & eaten both boath raw, and if (before it is ripe) it is boiled with Water & Sugar, it makes no Contemptible Food. In the Island of Barbadoes they press a Wine out of this fruit. The Boughs of this Tree afforded Nourishment to a Large Green Caterpillar wᶜʰ on the 22 of June became without Motion, Cast yᵉ Skin & Changed into a Chrysalis from wᶜʰ on the 23 Augˢᵗ was produc'd a Moth tinctured wᵗʰ Red, The Other yellow Caterpillar wᶜʰ Sticks about the Bough feeds also on the Leaves of this Tree, on the 3 Decamʳ. it Spun a Bagg of the Colour of Wood from wᶜʰ Jan: 24 came the White Moth wᶜʰ is placed on one of the leaves

Annotations

The Small Species of This Tree Called by the Dutch Zuursak is described in P.g 3ᵈ and I have seen it Cultivated in dutch Gardens Under the Name of Anona

Explanation of Plate 15th

These Water Mellons grow upon the Ground like ye Cucumbers in Holland they are coverd with a hard Rind, which by degrees loses its hardneſs, within the Pulp is very shining and Melts in ye Mouth like Sugar, It is of a gratefull Taste, & usefull for the recovery of Sick persons, the Flowers are small yellow & of a Contemptible form, the seeds are red, but when they come to their ripeneſs they turn black, This four square Caterpillar resides on ye Leaves of the Mellon, its fore & hinder part is Sky colourd, the Middle is green, and ye Feet coverd with a viscous Matter like a snail, on ye 5th of July it spun up in a Bag, which made me hope for some great Wonder, from this rare Caterpillar, but I was frustrated of my Expectation, for on ye 10th Augt 1700, it producd a small Moth of a contemptible shape, & this I also observd from my Ignorance that the most Beautifull & rare Caterpillars, are changd into Animals of no esteem, and the ugliest & most deformd Worms become the finest & most Elegant Moths and Butterflies.

Annotations

The Water Mellon is ye Anguria Citrullus dicta of B: Pin: & ye Citrullus folio Colocynthidis secto, semine nigro quibusdam Anguria of J: B:



P. Sluyter Sculp.

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EXPLICATIO FIGUR. XV.

HI *Melones Aquatici*, perinde ut cucumeres in Belgio, ad terram rependo creſcunt. Cortice duriore obducti ſunt, qui pedetentim interius ſuam amittit duritiem. Caro ſplendens inſtar ſacchari in ore liqueſcit, grati ſaporis, ad ſanitatem & ægrotantium refocillationem utilis. Parvi ſunt & forma viles floſculi, flaveſcentes; ſemina rubent, ad extremam vero ubi pervenerunt maturitatem, nigricant.

Quadrata eruca foliis iſtius Melonis inſidet, antica & poſtica corporis parte coerulea, media viridis, pedibus cute tectis viſcoſa, qualis eſt cochlearum. Die Julii 5. telæ ſe involuit, mirum quid ex rara iſthac eruca me ſperante: verum ſpe fruſtrata ſum, cum Auguſti die 10. Anni 1700. exiguus ejuſmodi ſpernendæque formæ papilio nocturnus inde prodiret. Idem plus vice ſimplici mihi accidit, ut pulcherrimæ rariſſimæque erucæ in fœda nulliuſque pretii animalcula tranſirent; deformes autem peſſimæque erucæ in papiliones elegantiſſimos vel nocturnos, vel diurnos, mutarentur.

Melo aquaticus iſte eſt Anguria Citrullus dicta ſemine nigro, quibusdam Anguria J. B. B. Pin, & Citrullus, folio Colocynthidis ſecto,

EXPLICATIO FIGUR. XVI.

HÆc in America *Arbor Caſchou*, & fructus *Poma Caſchou* nuncupantur. Duplex ejus reperitur ſpecies, quarum altera florem fert album pomaque flaveſcentia, altera rubicundum producit florem ejuſdemque coloris poma; ambæ tamen in viridi fronde conveniunt. Poma ſaporis licet acidiuſculi & adſtringentis, bona tamen ſunt, quæ coquantur. Vinum ex illis in quibuſdam Americæ locis expreſſum adeo forte eſt, ut qui juſto largius de eo bibunt, hinc inebrientur. Adhærent pomis curva quædam reniformia corpora, quæ proprie *Caſchou* dicuntur, velut in duorum pomorum, his excreſcentiis *Caſchou* dictis arborem tangentium, extremitatibus conſpicitur. Acris admodum eſt hæc pomi appendix, ejuſque ſuccus cutem carnemque abſumit, ſic prorſus, ut fonticulis excitandis apta exiſtat; aſſata vero adverſus diarrhœam proficua, vermes quoque pellit, caſtaneam ſapore æmulans. Folia coronæ inſtar cingunt arborem, velut in hoc ramo cernitur.

Anno 1701. duplicis generis eruca in hac arbore à me reperta eſt, quarum altera nivem candido æquabat colore, piloſa valde, ſicuti folio inſidentem vides. Ad diem 3. Martii hanc fronde arboris nutrivi, cum fuſca evaſit nympha, poſtea die 18. Martii transparens facta papilio, qualis in aëre volitans exhibetur.

Altera ſuperior eruca rubicunda erat & celeri reptatu, locum quærens, ubi telæ ſe includeret, id quod etiam die 5. Aprilis perficere inchoavit, die 20. ejuſdem menſis hinc iu papilionem lignei coloris mutata.

Hæc arbor eſt Anacardium Occidentale cajous dictum, officulo reni leporis figura, Herm. *& largius in* III. Parte Hort. Malabar. *deſcribitur ſub nomine* Kapa-mava & Katjavomaram. *Varia ejuſdem cognomina alia in* Flora Malabarica *noſtra collecta leguntur.*



P. Sluyter Sculp.

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Explanation of Plate 16th

This is call'd in America ye Caschow Tree, and ye Fruit Caschow Apples the Flowers and Apples of one of the kinds is yellow, & in ye other Red (there being two species of it) but the Leaves of both are green; the Apples are of an Astringent and Acid Taste, but nevertheleſs are good when boil'd, they Preſs a Wine out of them in America which is so Strong as to make those Drunk that Drink pretty largely of it; to the Apples their grows a Crooked & Bending Substance which is properly call'd the Caschow, and is drawn at ye two Apples on ye Top of the Tree, this substance at ye end of the Apples is so sharp, that if any one tastes thereof it makes their Mouth water, like a Fountain, nevertheleſs it is very good to stay a Lask and Expell Worms, & tast's like a Chesnut; the Leaves grow in a Bunch round ye Tree, as may be seen in this Bough;
In the year 1701 I found two kinds of Caterpillars on this Plant, one of which rival'd the Snow for whiteneſs, and was cover'd all over with Hairs, as you see it drawn on ye Leaf, I fed it till ye 3d of March with Leaves of this Tree, when it chang'd into a Chrysalis, & from thence on ye 18th of that Month into the Transparent Butterfly which is drawn here Flying, The other upper Caterpillar was Red & ran about very swift, seeking a place where to spin up, which it began to do Apl. 5th and on ye 20th produced this wood colour'd Moth.

Annotations

This Tree is the Anacardium Occidentale officulo reni leporis figura, of Herma, and is largely describ'd in part 3d of Hort: Malab: under ye Title of Kapa Mava, and Katjavomaram, its various Additional Names may all be found collected in my Flora Malab: ——

Explanation of Plate 17th

The common small Lemons are a Fruit at Surinam, which they put to & Eat with almost all their Meat; it is a Species of ye small Citrons which grows in ye Woods, the Tree of which grows as High as a Tall Apple Tree of Europe, The Leaves and Flowers are half as big as ye Common Citron, they draw a most precious Oyl from the Flowers, the small unripe Lemons are preserv'd with Sugar, & from the Rind of the Fruit, they likewise press a large Quantity of Oyl, the Trees bear Flowers, & green & ripe Fruit at ye same time all the year round in great Quantities like the Junipers in Germany, as do all ye other Trees at Surinam, Winter being unknown in those Countries;
This brown Caterpillar Gloriously Spotted with white is found in great numbers on these Trees, to which when they are squeez'd they stick in a heap and by that means often stick the Lemons together; likewise when they are touch'd, they Thrust two yellow Horns out of their Head as if they would either defend themselves or offend their Enemies, I fed them with Leaves of ye Lemon Tree, till March 24th 1700, when they chang'd into Chrysalis's which were of a brown colour, one of which is placed on ye Stem, which on the 2d of April the same year produced black Butterflies Spotted with Red and White, of which I have drawn two, one Flying, the other resting on a Bough;
This small Animal of a white colour, which creeps the Leaves is also in vast numbers on ye Lemon Trees, they underwent a change from ye 20th to ye 24th of April, when some of them became black Beetles and others white Beetles. —



P. Sluyter Sculp.

EXPLICATIO FIGUR. XVII.

EXigui *Limones* vulgariſſimi ſunt Surinami fructus, qui cibis fere omnibus apponuntur, & cum illis aſſumuntur. Exiguorum Citriorum eſt ſpecies quædam in ſylvis naſcens, cujus arbor ad altitudinem proceræ mali excreſcit, folia dimidia vulgaris citri folia magnitudine æquant, flores quoque eâdem proportione minores exiſtunt. Pretioſiſſimum ex flore oleum elicitur, parvi limones immaturi ſaccharo condiuntur, & cortices fructus expreſſi pariter oleum largiuntur. Arbores toto anno flores gerunt fructusque, tam maturos, quam immaturos, copioſiſſimos, inſtar Juniperorum in Germania, neque minus, ut reliquæ omnes in regione Surinamenſium arbores, quippe cum hyeme illa omnino careat.

Fuſca hæc eruca maculaque ſuperbiens albicante, plurima reperitur in arboribus iſtis, quibus in acervos coacta adhæret. Limacum in modum ſibi invicem agglutinantur; tacta vero flaveſcentia ex capite cornicula protrudunt, vel ſemetipſas quaſi defenſuræ, vel hoſtes etiam ſuos offenſuræ. Foliis Limonum ad d. 24. Mart. Anno 1700. easdem nutrivi, tum in fuſci coloris aurelias mutatæ ſunt, qualis in caudice jacens delineatur; hinc die Aprilis 2. ejusdem anni papiliones prodierunt nigricantes, & ex albo rubroque maculatæ, cujuſmodi binas, volantem alteram, ramoque inſidentem alteram, repræſentavimus.

Puſilla iſta animalcula, coloris albicantis, quæ foliorum cuidam irrepunt, copioſa in Limonum arboribus reperiuntur: à 20. ad 24. diem Aprilis metamorphoſin ſubierunt, quibusdam in atros, aliis in albicantes ſcarabæos transfiguratis.

EXPLICATIO FIGUR. XVIII.

HAc Tabula decima & octava araneas, formicas & aviculas Belgis *Colobritgens* dictas, in ramo arboris *Guajavæ* repræſentavi, cum araneæ omnium maximæ plerumque in iſta arbore à me repertæ ſint. In proxime ſequenti figura XIX. iterum *Guajavam* cum inſectis ſuis propoſitura, de ea nunc taceo, ad araneas me convertens.

Iſtiusmodi magnas nigrasque araneas in *Guajava* arbore plurimas inveni, quibus globoſus ille nidus, telam erucæ in ſequenti figura exhibens, præbet domicilium: non vero, prout à quibusdam peregrinatoribus nobis obtrudi cœpit, longiores telas ducunt. Undique pilis tectæ ſunt, munitæ inſuper acuminatis dentibus, quibuscum graviſſime morſitando periculoſa infligunt vulnera, his ipſis ſimul humore quodam infuſo. Communis ipſarum esca ſunt formicæ, præda, dum in arbores excurrunt, haud facile effugiens; quod more omnium aranearum octo oculis inſtructæ ſint, quorum bini ſurſum, bini deorſum, bini ad dextram, bini denique ad ſiniſtram ſpectant. Formicarum defectu, ipſas è nidis tollunt aviculas, omnemque corpusculis cruorem exſugunt. Pellem quidem pari modo ac erucæ ſubinde mutant; nunquam tamen volantes reperi. Minus araneorum genus, quale telæ inhærens delineatur, ovula gerit ſua ſub ventre in placenta quadam, ubi etiam excluduntur fœtus. Pariter octo oculis muniuntur, qui tamen hinc inde & confuſe magis, quam in iſtis majoribus, locati ſunt.

Prægrandes in America dantur formicæ, quæ integras arbores una nocte ita fronde ſua nudare poſſunt, ut ſcopas non arbores referant. Binis ſunt armatæ curvis dentibus, forficis inſtar ſe ipſos interſecantibus, horum ope ſic arboris reſecant folia, ut in terram decidant, arbor vero appareat nuda, qualis in Europa ab hyeme reddita cernitur. Decidentem in tellure frondem millenæ excipiunt formicæ, hanc exſpectantes prædam, in nidos haud pro nutritione ſua, ſed tenellis fœtibus, adhuc vermiculis, ſtatim deferendam. Perinde enim ac culices, ſemina ponunt alatæ formicæ, unde vermiculi ſive acari duplicis generis excluduntur, aliis eorum telæ ſemet involventibus, aliis & plerisque in nymphas transeuntibus. Hæ nymphæ illud ipſum ſunt, quod rei ignari formicarum ova nuncupant; cum hæc multo ſint minora, illæ ad nutriendas Surinami gallinas faciant, meliusque his vel avena, vel hordeo, pabulum præbeant. Prodeunt ex nymphis formicæ, quæ mutata pelle fiunt alatæ, & tum ponunt ovula, vermiculos iſtos producentia, quorum nutritioni tanta alacritate invigilant formicæ: in calidis etenim illis regionibus adverſus frigora futura non opus eſt quod ſibi proſpiciant, quoniam nulla unquam ibi regnat hyems. Cavernas in terris excavant ad octo pedum altitudinem, tam concinne efformatas, ut humanæ artis opus diceres. Quod ſi aliorſum transmigrare cupiunt, non data ad eousque perveniendum via, pontem hoc ſibi ſtruunt modo, ut prima alicubi dentibus ligno infixis quiescat, ſecunda priorem ſequatur eique adhæreat firmiter, tertia rurſus ſecundæ, quarta denuo tertiæ & ita ſibi ipſis porro invicem appendentes, libere ſeſe exponant vento, quousque hujus flatu ad iſtum locum projiciantur, & ſic millenis aliis transcurrentibus pro ponte inſerviant. Cum araneis, reliquisque omnibus hujus terræ inſectis, perpetua his formicis intercedit inimicitia. Quando è cavernis ſuis erumpunt, id quod ſingulis annis fit ſemel, innumera earum prodit multitudo, qua domos replent, ex uno in aliud conclave transmigrant, & animalcula cuncta majora, minora, exſugendo necant. Majus iſtiusmodi phalangium momento fere hinc eſt conſumtum, quoniam tantis cumulatur acervis, ut expedire tam cito ſeſe & à periculo liberare nequeat. Quin ipſi homines fuga ſibi caveant oportet, adeo unum poſt aliud acervatim permeant cubiculum; atque ſic tota domo vaſtata & quaſi terſa, proximam petunt, donec tandem ad ſuas redeant caveas.

Aviculæ *Colobritgens* Belgis dictæ ab araneo nidis ſuis inſidentes capiuntur, aliàs cibus Sacerdotum Surinamenſium, quibus, ceu relatum mihi eſt, aliis veſci cibis prohibitum eſt. Quaterna perinde ut aliæ aves ponunt ova, eaque incubando excluduntur. Celerrime volitant aviculæ, expanſisque mel è floribus ſugunt alis, ut immotæ veluti in aëre hæreant, variis elegantiſſime pictæ coloribus, ipſoque pavone pulchriores.


P: Sluyter Sculp:

Explanation of Plate 18th

In this Plate I have represented y^e Spiders, Ants, & small Birds call'd by the Dutch Colobritgens on a Bough of y^e Guajava Tree, with those spiders which are of all others ye biggest & Fullest, & which I found on ye same Tree, I have describ'd ye Guajava in the next plate, with its Caterpillars, of which I shall now be silent, & turn my discourse to ye spiders; of these Large black spiders I found many on ye Guajava which make themselves a round Hole for a House in ye Bag of ye Caterpillar in ye next plate, tho they are not so large as Travellers would obtrude upon us, they are cover'd all over Hairs, & Fortified with 2 sharp Nippers with which they inflict great dangerous & Deadly Wounds, Infusing a Humour into them, their common Food is Ants, who when they run upon ye Trees, very hardly Escape them, they are furnish'd (as all Spiders are) with 8 Eyes 2 of which look upward 2 downward 2 to ye right & 2 to ye left, for want of Ants they will take one of ye Little Birds off ye Nest, & suck all ye Blood out of their Bodies, they cast their skin after ye manner of Caterpillars, but I never found any Flying, ye smaller spider which Inhabits the Webb, carries its Eggs in a Little Bag under its Belly; from which ye young ones come, it is also Furnish'd with 8 Eyes but not in such order, & more confusedly than ye other large ones; — There are many large Ants in America, which will strip ye Trees so in one Night that they seem more like Shrubs than Trees, they are Arm'd with 2 crooked Teeth, which cut like a Pair of Scissars, & with which they cut all ye Leaves off ye Trees so that they look like ye Trees of Europe in Winter, & in ye mean time there are Thousands of others who wait at ye Bottom, for ye Leaves which fall, to carry them into their Caves, not for Food but to make a Defence for their Young ones; which are Worms; for some Winged Ants lay their Seed like Gnats, from whence ye Fœtus or Worms are produced, others Spin up in Bags others and ye greatest part change in Chrysalis's, which are those that ye Ignorant mistake for Ants Eggs, these when they are very small are given to ye Chickens at Surinam, & it fattens them better than Bran or Barley, from these Chrysalis's come Ants, which casting their skin become winged & then lay their Seed producing these Vermin, for whose Nourishment ye Ants watch with so much alacrity, for in those Hot Countries where Winter never Reigns, there can be no fear of approaching Cold; They make their Caves in ye Earth to ye Depth of 8 Feet, so neatly form'd that you would think it the work of Human Art, if they want to go to any place where there is no way, the First fix's its Nippers fast in ye Tree, the 2^d takes hold of ye 1st ye 3^d of ye 2^d ye 4th of ye 3^d & in that manner hanging to one another they expose themselves to ye Wind till it carries them to ye place, & so their Bodies serve as a Bridge for Thousands to paſs over, they have Perpetual Enmity with ye Spiders & all ye other Insects of ye Place, when they break forth from their Caves, as they do once every year, they come forth in such innumerable Multitudes that they fill all ye Houses, & as they Travel all in a Body they destroy all other Insects both little & great by sucking them, even ye great Spider they destroy in a Moment, for they beset him in such Heaps, that he cannot disengage himself soon enough & free himself from danger, yet it is even neceſsary for Men to take care of themselves till they have gone in Heaps thro every Room, & when they have ravag'd & scour'd the whole House, they immediately seek another till they return again to their Caves; The small Colobritgens are often taken off their Nests by ye Spiders they are likewise Eaten by ye Indian Priests, who as I am told forbid them to every one else, they lay 4 Eggs like other Birds, & Hatch them by setting, they Fly extream swift and suck ye Honey from Flowers while their wings being open they remain without motion in ye Air, they are of most Excellent colours, & finer than Peacocks.

Explanation of Plate 19th

This is a Bough of ye Guajava, which Tree ye Indians so call from ye Fruit, it grows as high as an Apple Tree of Germany ye Leaves are like those of ye Plumb Tree, the Flowers are Milk white, with many yellow Chieves in ye Middle, the Fruit is cover'd with a tender sulphur colour'd Rind, ye Pulp is red & of a grateull Taste both raw & Boil'd, within it is full of small Seeds, which stick to ye red Pulp, & which are good when raw, but when they Boil ye Fruit, they take out all ye Seeds and Juice with a Spoon, & use it in making Cheese Cakes, & Conserves, These Trees grow very easily, ye Soil agreeing with their nature, so that they naturally grow in great numbers even in ye Woods;

Of these great Caterpillars, I found not a few in this Tree, & fed them with ye Leaves, they were white, Striated with black, having on each side Fifty red Spots like Coral, the Famous Leuwenhoek thinks these Coral Spots to be Eyes, in his 146th Epistle, from Page 430 to 452; which neverthess I could never yet perceive, for by that means they could without any trouble have seen their Food, either from their sides or Back, which I could not to this Day observe; I am sure that I could not see that they had any Eye Lids, or Membranes of ye Eye to shut; When they came to their Perfect bigness they spun very large Bags hanging from ye Tree, which done they changed into Chrysalis's, as I observ'd the 20th of Octobr 1699, by that which I had, from which on ye 22d of Jan: y came this rare Moth, which was white Striated with black, but some of these Caterpillars underwent a stranger change, turning into white Grubs & after ten Days into elegant green Flies.

The upper green Caterpillar I fed on ye same leaves till ye 2d of August 1700, when it went into a Chrysalis, which sticks to one of ye Leaves, these on ye 15th 16th & 17th Days produced these Butterflies spotted with black and Transparent.

Annotations

In this & the preceding Plate are two Boughs of ye Guajava alba dulcis describ'd pt 1st Cap. 63. of Hort: Amst: two species of it are cultivated in ye Garden at Amsterdam which both of them bear Flowers & Fruit its Additional names given it by divers Authors, are collected in my Flora Mal: under ye name of Guajava alba dulcis &c.



P. Sluyter Sculp.

EXPLICATIO FIGUR. XIX.

HIc ramus *Guajavæ* exhibetur, arboris ex fructu ab Indis *Guajava* vocatæ. Quantam in Germania malus, altitudinem acquirit, folia cum prunorum foliis conveniunt, flores lactei multis flaveſcentibus donantur ſtaminibus. Fructus, cortice teneriore ſulphureo cinctus, carnem habet rubicundam, quæ & cruda & cocta grati eſt ſaporis: intus ſemina continet exigua plura, rubeſcenti pulpæ inhærentia, atque hæc cruda aſſumta pariter quidem bona eſt; attamen ubi coquitur fructus, quicquid ſeminum & humiditatis adeſt, cochleari ſolet eximi, atque ſic ad placentas & conſervas inde parandas adhibetur. Facillime creſcunt hæ arbores, quia ſolum naturæ ipſarum congruit, ſic ut copioſæ ſponte & in ſylvis naſcentes inveniantur.

Magnarum hujuſmodi erucarum non paucas & in prædicta arbore reperi, & foliis ejusdem nutrivi. Ex atro ſtriatæ candicant, ab utroque latere quinquaginta punctis rubicundis inſtar corallorum ſplendentibus ornatæ. Clar. Leuwenhoekius quidem hæc puncta corallina oculos eſſe putat epiſtola 146 a pag. 430 ad 452. verum mihi id ipſum hucuſque nondum patuit, quippe cum iſta ratione & à tergo & à lateribus pabulum nullo negotio detegerent, quod tamen in hanc usque diem non obſervavi, certe palpebris illas nullis, vel membrana oculos claudente, inſtructas vidi. Cum ad juſtam pervenerunt magnitudinem, prægrandem forma nidi telam ſtruunt, ex arbore pendulam, quo facto in aurelias transformantur, ceu An. 1699. die 20. Octobris apud me contigiſſe notavi, unde 22. die Januarii ejuſcemodi phalænæ prodierunt, cum nigris ſtriis albicantes. Nonnullæ tamen erucarum, rariore metamorphoſi, candidiores fiebant acari, poſt elapſos decem dies iterum in muſcas eleganter virideſcentes permutati.

Superiorem viride tinctam erucam eisdem foliis ad d. 2. Auguſti Anni 1700. alui, tum vero in aureliam transiit, qualis in uno foliorum hæret, & hinc die 15. 16. & 17. tales productæ ſunt papiliones, ex atro maculatæ & transparentes.

Bini in hâc & præcedenti icone exhibiti rami ſunt ex Guajava alba-dulci *cap.63. P.I.Horti Amſtelodamenſ. deſcripta. Duplex enim ejus ſpecies in Horto Amſtelodamenſi colitur, quæ utraque flores ibi fructusque protulit. Diverſa cognomina, quibus à variis auctoribus inſignitur, omnia collecta reperies in Flora Malabarica mea, ſub nomine,* Guajava alba dulcis, fructu longiore. Herm. Catal.

EXPLICATIO FIGUR. XX.

Anno 1700. menſe Aprilis commorata in prædio Surinamenſi, quod erat Feminæ Soomelsdyk, & Providentia nuncupari ſueverat, varias de inſectis obſervationes collegi, ingenti quoque copia arborum *Gummi Guttæ* ſponte naſcentium ibidem reperta; quarum unius hic ramum exhibeo. Inſtar betulæ in Europa fere creſcit arbor, exterius cortice albicante ſtriato obducta; hoc inciſo, exſtillat gummi, quod ipſum ut deſcribamus, non erit opus, quippe pictoribus ſolummodo cognitum eſt.

Reperi magnam iſtiusmodi, & atra viridique ſtria notatam erucam in hac arbore, cujus etiam fronde ad finem uſque menſis Aprilis à me nutrita fuit, ubi poſtquam globoſam lignei coloris fabricaſſet telam, huic incluſa in aureliam mutata eſt, atque ex illa die 3. Junii in papilionem elegantiſſimum, qualis hic & in aëre & ramo inſidens expreſſus eſt. Antequam transfigurata eſſet eruca, viridis in rubicundum transivit colorem, prius ſcilicet, quam aurelia fieret, erucâ perfectam jam nactâ magnitudinem.

Variæ ſunt arbores Gutta Gamba *fundentes, uti* Carcapuli Acoſtæ, *item* Carcapuli Linſchotani, (*quarum prior non ſolum convenit cum* Coddam-Pulli, *in Part. I. Horti Malabar. deſcripta, ſed eadem eſt,*) *tum quoque hic depicta, denique &* Eſulæ Indicæ affinis planta, *de qua Bontius lib. VI. cap.* 57. *loquitur.* Gutta Gamba *vero ex arbore* Coddam-Pulli *in Horto Malabarico deſcripta ſtillare, S. à Dale in Pharmacologia ſua pag.* 484. *arbitratur.*


J. Mulder Sculp.

Explanation of y.^e 20.th Plate

In the month of April 1700 being at a Country place at Surinam belonging to one M.^dm Soomelsdyk, & was call'd Providence, I collected various observations on Insects, & observ'd many Trees growing wild, which afforded great quantities of Liquid Gum, of one of which this is a Bough; it grows almost like ye Birch Tree of Europe, the outward Bark being white, cover'd over with Stripes, this being cut ye Gum distills out, which there is no need to describe, for it is only known to Painters,

I found this large black Caterpillar (striated with green) on this Tree with the Boughs of which I fed it till the end of April, when it spun a large Bag in which it chang'd into a Chrysalis; from the Bag (which was of a Wood colour) on ye 3.^d of June came this most Elegant Moth, of which I have drawn one in ye Air, & another on ye Bough, the Caterpillar grows to its full bigness almost as soon as it comes from ye Egg, and before it changes into a Chrysalis, it changes its green to red;

Annotations

Various are the Plants affording the Gutta Gamba as ye Carcapuli Acostæ (which not only resembles but is ye same as ye Coddam Pulli in P.^t 1.st of Hort: Mal:) and the Carcapuli Linschotani and lastly (beside this here Painted) the Cicutæ Indicæ affinis planta of which Bontius speaks Lib: 6. Cap: 57, S. A: Dale in his Pharmacologia Judges the Gutta Gamba, to distill out of ye Tree Coddam Pulli describ'd in Hortus Malabaricus.

Explanation of Plate 21st

This Fruit is call'd in America Marquiaas & is preferable to ye Paſsion Flower, growing much larger than ours in Europe; it has a very fine smell, & casts the Scent a great way off, The Plant creeps up any place like Withwind or Bearwind, & is very convenient to make Green summer Houses in Gardens and as the Dutch at Surinam do not gather much of it for Use, it will in ye space of 2 years cover one of these places all over with green; & by its scent it allures to it a vast number of winged Animals, who make their Habitations thereon. The Fruit contains a black seed, cover'd over with a white Glutinous Matter of a gratefull and cooling Taste, — The first & largest Caterpillars which is placed on ye Leaf, feeds on them, the 28th of May 1701, Spinning itself up in a Bag, it chang'd into a Chrysalis, which I have placed near the Worm, & from which on ye 7th of June came a small Butterfly which I have drawn Flying.

The second Caterpillar placed on ye Stem is of a green colour, on ye last Day of May I found it feeding on these Flowers, it makes a rare Habitation, which is compos'd of several small Hollow bits of Sticks set upright over ye hole where it lives, by this means its House is furnish'd with several Little Bolter holes, & sometimes it Pops its Head out at one, & presently after at another, as it is drawn on ye Bud, On ye 10th of June it was chang'd into a brown Animal Spotted with red, which is drawn on ye Stem,

The third small Caterpillar, which is drawn on ye Fruit, Feeds on ye Leaves, on ye 4th of June, that which I had spun up in such a Bag as is placed on ye Stem from which on ye 14th came this so beautifully variegated Fly, which is placed on ye Stem, & which has Feet divided at ye end, they are so extremely tender that the least touch kills them.

Annotations

This Plant is ye Murucuia Guaca of Marggrave, & the Murucuia quarta of Piso, also ye clematis Indica Fructu citriformi Foliis Oblongis of Plum: 64. Tab: 80. by Tournefort in Inst: rei Herb: it is call'd Granadilla Fructu citriformi Foliis Oblongis, & by Hermannus in Catel: Hort: Academ: Cucumis flos Paſsionis dictus Guajave Folio Major, but after this he has placed it in ye same Book among ye Plants which for ye Shape of ye Flowers are call'd Paſsion Flowers, & again (in Prod: Parad: Bat:) among y^e Clematum (with which it agrees neither in Flower nor Heads of Seed) and so makes a very great Error in his first Book, but this mistake he has finally amended in y^e said Prodromus Paradici Batava, Page y^e 177th.



J. Mulder Sculp

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EXPLICATIO FIGUR. XXI.

M*Arquiaas* dicitur in America hic fructus; præcedens eundem flos eſt *Flos Paſſionis*, noſtris tamen in Europa creſcentibus multo major, qui odorem ſpirat ſuaviſſimum, è longinquo olfactum gratia ſua perfundentem. Planta ipſa uti Convolvulus ſcandit, ad frondeas caſas in hortis veſtiendas aptiſſima, licet illa Surinamenſes Belgæ non multum utantur, ſic ut binorum annorum ſpatio integram creſcendo tegat viridem caſam, quæ variis animalculis alatis ſuavitate odoris eò allectis poſtmodum dulce præbet habitaculum. Fructus nigrum continet ſemen, albo glutine circumdatum, quod refrigerantis & pergrati ſaporis eſt.

Prima majuſculo folio inſidens eruca, eodem etiam veſcitur: An. 1701. die 28. Maji texturæ incluſa in aureliam, qualis juxta erucam depicta cernitur, & ex iſta porro die 7. Junii mutata eſt in papilionem diurnam exiguam, uti volantem exhibui.

Secunda cauli inhærens eruca, viridi tincta colore, ultimo die Maji in floribus prædictis à me reperta fuit, eosdem depaſcens. Raro admodum gaudebat domicilio, quod ex variis tubulis ſuper cava lignorum fruſtula erectis compoſitum erat, hinc inde domum ſuam multis inſtructam capſulis percurrente eruca, & jam ex uno tubulorum, mox iterum ex altero proſpiciente, veluti in apice ejuſdem cernitur. Die 10. Junii in fuſcum ejusmodi transformata eſt animalculum, quale inſidet cauli, rubicundis maculis diſtinctum.

Erucula tertia, cujusmodi in fructu hæret, etiam folia plantæ pro eſca habet. Die 4. Junii apud me telæ ſe involuit iſtius formæ, ac in caule poſita conſpicitur; unde porro die 14. tam pulchre variegata prodiit muſca, quam in caule ſedet, pedibus fiſſis, atque tenerrimis, adeo, ut ad leviſſimum attactum deciderent.

Hæc planta eſt Murucuia Guacu *Marggravii*, *&* Murucuia quarta *Piſonis*, *item* Clematis Indica fructu citriformi, foliis oblongis *Plum. 64. Tab.* 80. *A Tournefortio etiam in Inſtitut. Rei Herbar. vocatur* Granadilla fructu citriformi, foliis oblongis; *& ab Hermanno in Catologo Horti Academici* Cucumis Flos Paſſionis dictus, Guajavæ folio major. *Hermannus poſtquam hanc plantam in Catalogo Horti Academici ſuo inter plantas retuliſſet, quæ à florum forma* Flores Paſſionis *dicuntur; eandem nihilominus in Prodromo Paradiſi Batavi inter* Clematum *ſpecies (quibuſcum neque floris, neque capſulæ ſeminalis reſpectu convenit) rurſus locavit, ac ſi antea in Catalogo longe aberraſſet: hoc ipſum tamen idem Hermannus denuo in ipſo Paradiſo Batavo pag. 177. emendavit.*

EXPLICATIO FIGUR. XXII.

RUbicunda hæc *Lilia* ex albicante bulbo paſſim ſponte progerminant, viridi folio ſericum ſplendore ſuo imitante; vires eorum tamen ſunt ignotæ. Bulborum nonnullos inde mecum attuli, qui in hortis Belgicis prius flores, dein folia protulerunt.

Quam virenti cernis irrepere folio erucam, pilis hirta eſt nigris, ferrea fila duritie æmulantibus, capite ac pedibus rubet, corpore ex cœruleo maculata, cingente maculas circulo flavescente. Foliis liliorum virentibus paſta, die 4. Junii textum oviforme contexit, cui incluſa in fuscam transfigurabatur aureliam, qualem plantæ medio appoſui: ex iſta die 30. Junii elegans prodiit nocturnus papiliunculus, cujus alæ anteriores ligneo ſeu ex fusco pallente, poſteriores aurantio maculis nigris interſtincto colore, tinctæ erant, ceu in volante hic repræſentatur.

Exigua vero iſthæc Eruca, cum viridi & albicante ſtria rubens, in agro Surinamenſi graminibus ad hæc Lilia proximis inhæſit. Die Auguſti 10. telam ſibi ſtruxit candicantem, uti folio impoſita cernitur, unde ejusdem menſis die 24. muſca ex atro ſulphurea, qualem hic pariter vides, producta eſt.

Eruca hæc ab iſta, cui Fol. 12. Banana esca eſſe dicitur, prorſus differt, quamvis inter utriusque phalænas nullum fere discrimen intercedat.

Planta hæc Lilionarciſſus Polyantos, flore incarnato, fundo ex luteo albeſcente *vocatur apud Sloane in Cat. Jamaic. & ab Hermanno in Paradiſ. Batav. appellatur* Lilium Americanum puniceo flore, Bella dona dictum.



P Sluyter Sculp.

Explanation of Plate 22.

These red Lillies having a white Bulbous Root, grow wild, almost every where at Surinam, the green Leaves shine like Sattin, but I am Ignorant of their Virtues, I brought some of the Bulbs with me to Holland, & Sett them in a Garden, & they first put out Flowers, & afterwards Leaves; The Caterpillar which you see creeping upon this Plant is cover'd with rough black Hairs, which are almost as hard as Iron Wires; their Head and Feet are Red, & their Body spotted with Sky colour spots, which are Circled round with yellow; it fed on y.e green Leaves of y.e Lillies, & on y.e 4.th of June spun an Oval Bag, it which it was chang'd into a brown Chrysali[s] which I have placed on y.e Middle of the Plant, & from which on y.e 30.th of y.e same Month came this small Elegant Moth, y.e foremost wings of which were of Wood colour or Pale brown, the hinder ones were Orange colour'd spotted with black, as I have drawn it flying — This other small Caterpillar which was red Striated with green & white, I found in a Field at Surinam upon the Grass near these Lillies; the 10.th of August it spun itself a white Bag, which is here drawn on y.e Leaf, out of which on y.e 24.th of y.e same Month came a Sulphur colour'd Fly, spotted with black which is likewise here drawn; Altho the first Caterpillar differs entirely from that which feeds on y.e Banana in Fol: 12, yet the two Moths are exactly alike.

Annotations

This Plant is call'd by Sloane in Catal: Jamaic: Lilionarcissus Polyantos flore in carnato, fundo ex luteo albescente, and by Hermannus in his Paradis Batav: Lilium Americanum puniceo flore, Balla dona dictum.

Explanation of Plate 23d

This pale yellow Fruit is call'd Baccoves, & is a Species of ye Banana in Page 12th the Leaves are exactly alike & ye Fruit differs as much as an Apple from a Pear in Europe, ye Pulp of ye Baccoves being softer than the Banana tho it serves to ye same Uses, & also ye Indians use to make Vinegar of this (because it soonest grows sower) Preparing it with Water and Sugar; The Caterpillar which is Painted brown, I found on ye Leaves of this Tree it is Arm'd on ye Back with four sharp Prickles; has a kind of Coronet upon its Head, a double Tail, & red Feet, On ye 3d of Decr becoming Sick, they chang'd into Wood colour'd Chrysalis's, having on each side two Spots like Burnish'd Silver, from this Chrysalis on ye 20th of ye same Month came this Beautifull Butterfly, the two upper wings on ye inside being a light Oker, & ye two lower a pleasant Sky colour, the whole Butterfly being (on ye outside) Spotted & striped, with yellow, Scarlet, White & Black, in Holland it is call'd ye small Atlas; — For a greater Ornament to ye Picture, I have here drawn this Sky colour'd Lizard, it made a Nest in my House in ye Ground, where it lay'd 4 Eggs, like ye 3 which I have placed upon ye Stem, being round and white. Being then preparing to go into Holland, I took ye Eggs with me on Board ye Ship, where ye young Lizards were Hatch'd, but were no bigger than that which may be discern'd on ye Stem; & wanting both ye old one & Food they all Died.

Annotations

This Plant is a species of ye Musa Serapionis, drawn in Plate 12th, of this Musa there is various kinds, sixteen of which are reckon'd up, & ye difference between each of them describ'd in ye Hortus Malabaricus part 1st Page 28th.



P Sluyter ſculp.

EXPLICATIO FIGUR. XXIII.

FRuctus hic pallide flaveſcens *Baccoves* dicitur, eſtque ſpecies *Bananæ* Icone XII. exhibitæ, cujus folia etiam cum his plane conveniunt. Fructus haud aliter, quam in Europa poma & pyra, diſcrepant, *Baccoves* tamen carne quodammodo gaudent teneriore, quam *Bananæ*. Iisdem uterque uſibus inſervit, præterquam quod hic fructus aceto, ex aquâ & ſaccharo parato, indi ſoleat, quo citius aceſcat.

Eruca fuſco tincta pigmento, in foliis hujus arboris à me reperta, quatuor aculeis in dorſo armatur, caput veluti coronâ ſuperbit, cauda bifida, pedeſque ſunt rubicundi. Die 3. Decembris fixa hærens in aureliam coloris lignei & ex utroque latere duplici macula argentea fulgentem transformata fuit, unde 20. ejuſdem menſis die pulcher factus eſt papilio, cujus binæ ſuperiores alæ interius colore ochræ candidiore, binæ inferiores è cœruleo peramœno pictæ ſunt, toto papilione exterius flavis, puniceis, albis & nigris ſtriis inſignito: Parvus Atlas in Belgio nuncupatur.

Cœruleatam cum ovulis ſuis Lacertam ideo maxime appoſui, ut majus iconi accederet ornamentum. Domi meæ in terra nidificaverat, quatuor ovis rotundis & albicantibus in nidulo poſitis, veluti tria ſunt illa caudici impoſita. Iter in Belgium parans eadem mecum in navem deportavi ova, unde tenellæ in mari excludebantur lacertæ, exiles, neque majores, quam earum una in caule cernitur; ſed matris & pabuli defectum morte luebant.

Hæc eſt ſpecies Muſæ Serapionis *fol. XII. repræſentatæ. Illud Muſæ genus varias diverſasque continet ſpecies, quarum in Part. I. Horti Malabarici fol. 20. ſedecim numeratæ leguntur, ſingularum diſcrimine appoſito.*

EXPLICATIO FIGUR. XXIV.

HIc *Carduus ſpinoſus* in agris Surinamenſibus ſponte proveniens, flavis ornatur floribus, & *Maccaï* ibidem nuncupari ſuevit. Ad hominis fere pertingit altitudinem; prægrandia ejus ſunt folia, cæſiis venis eadem perreptantibus.

Veſcuntur ſpinoſæ hujus plantæ radice vermes exigui, capite & cauda nigri, corpore autem ex aurantio tincti, qui pedetentim in parvos ſcarabæos flavis adſperſos maculis transfigurantur, quemadmodum menſe Martio An. 1701. obſervavi, & hic plantæ inferius appingi curavi. Cum vero iſtorum vermiculorum metamorphoſis ab illa, quam communiter erucæ ſubeunt, multum differre mihi videretur, ulterius circa ſcarabæorum transmutationes inveſtigare circumſtantias decrevi.

Aliud itaque die 26. Martii An. 1701. adhuc reperi genus vermium ligno putrido incluſorum, qui paulatim & mutatione oculis conſpicuâ, in ſcarabæos transibant, priſtina vermium forma in ventre quodammodo ſuperſtite remanente, velut in ſuperna plantæ parte exhibui. Creſcunt vermium dentes, exporriguntur, & in cornicula Scarabæorum abeunt; alæ corporis initio coloris ochræ tandem nigricant, prout reliquum animalculi corpus ſenſim ſenſimque transformatur, creſcit & ad perfectam molem augetur. Ponunt ova ſua hi Scarabæi, unde rurſus poſtea excluduntur vermes, qualem medio cardui impoſui.

Planta hæc eſt Papaver Spinoſum *Caſpar. & Joh. Bauhini; ex quo tamen* Tournefortius *in Inſtitut. Rei Herb. non ſine ratione novum conſtituit genus, plantam proponens ſub nomine* Argemone Mexicana.



J. Mulder Sculp

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Explanation of Plate 24th

This prickly Thistle grows wild in ye Fields at Surinam, it is adorn'd with yellow Flowers, & is there call'd, Maccai, being a Thorny Poppy, it grows almost to ye Hight of a Man, ye Leaves are large & run all over with blue Veins; On ye Root of this Prickly Plant, feeds a small Worm, whose Head & Tail is black & ye Body Orange colour'd, This Insect by degrees changes into small Beetles spotted with yellow, This Metamorphosis I observ'd in March 1701, & have here drawn on ye bottom part of ye Plant, the changes of these Insects differing very much from Caterpillars, I have determin'd to Publish ye transformation of Beetles.
On ye 26th of March I found other worms on this Plant, inclos'd in rotten Wood, by degrees they chang'd into Beetles, the Transformation being visible to ye Eye, their Belly retains ye same form, as that of ye Worm, as it is drawn on ye upper end of ye plate, ye Teeth of ye worm growing out, are extended to a great length, & become ye Horns of ye Beetles whose Wings as well as Body at first are oher colour, but afterwards turn black, as likewise does by little & little ye whole Body as its grows to its Perfect bigness, These Beetles lay Eggs, from which again are produced Worms, which are such as I have drawn on ye Middle of ye Picture.

Annotations

This Plant is ye Papaper Spinosum of Casper & Jn: Bauhinus of which also Tournefortius in Instit: Rei Herb: has (not without reason) assign'd a new species, propounding it under ye Title of, Argemone Mexicana.

Explanation of Plate 25th

This is ye greater of ye two Species of ye Vanilla (or Pepper Tree) which grows in ye Fields at Surinam; ye other small Species of it is full of Leaves & Fruit, the Fruit of this is a Span thick, & is no tenderer than ye common House Leek of Europe, it creeps up Trees like ye Clematis or Creepers, & sticks firmly to them, the Stem & Leaves are of a Grass, & ye Fruit of a Bean Green, & full of Triangular Seeds, which contain a sweet Oily Substance. it grows to a Tree Excellently well in all places at Surinam, but especially in those that are Moist & Marshy. This Fruit is well known to be Used in making ye Sincolata; it is much to be lamented that this place is destitute of curious Gardeners, who might not only cultivate the Plants already known, but without doubt discover many others in those vast & Fertile Countries;

On this Plant I have often seen ye Caterpillar here drawn, which is a scarlet Straited with yellow (I have also seen it on ye Muruciya Pasion Flower in plate ye 21st) I fed them till ye end of May when becoming fix'd, they chang'd into Chrysalis's & from thence (on ye 7th of June) into these beautifull Butterflies, the inside of which is yellow or ye colour of a Crocus, the outside being yellow Red & brown spotted with Silver of which I have drawn one Flying & another settled on a leaf. The other small Caterpillar (which may be discern'd on ye Leaf) was green on ye 12th Feb. 1700, that which I had chang'd into a Chrysalis, which was likewise green, & from which on ye next Day came a small Grey Moth very swift of Flight.

Annota~~ta~~tions

This is ye Volubilis Siliquosa Mexicana foliis plantaginis of Ray, & ye Tlilxochitl flos Niger et Aracus Aromaticus of Hernandes in Hist: Mexa by Plumiere in his Tract intitled Nova Plantar: American: Genera, it is call'd ye Vanilla flore Viridi et albo, fructu Nigrescente; other Authors have given it divers Additional & different names, all which may be found collected by Pluckenet in his Book which is intitled Almagestum Botanicum page 381;



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EXPLICATIO FIGUR. XXV.

HÆc *Vanillæ* ſpecies eſt maxima, ex binis, quæ in agro Surinamenſi creſcunt. Earum altera minore folio & fructu præditaeſt; folia hujus digitum craſſitie adæquant, neque Sedo vulgari domeſticoinEuropa ſunt tenuiora. Hæc in arbores uti Clematis aſcendit iisque adhæret firmiter; caulis & folia coloris ſunt graminei, fructus viridis inſtar fabæ triangularis ſcatet ſeminibus oleoſis ſuaveolentibus. Sponte paſſim nascens ad arborum excurrit excelſiſſimas, præcipue tamen illas, quæ in locis ſunt humidis ac paludoſis. Cum uſus ipſius fructus ad conficiendam Succolatam ſatis innotuerit; has terras dolendum eſt curioſis deſtitui incolis, qui iſtas colant arbores atque alias id genus plures disquirant, in tam vaſta & fertili regione procul dubio reperiundas.

Huic plantæ ſæpius irrepere vidi Erucas iſtas punicei coloris & ex flavo ſtriatas, (veluti & in *Murucuja* Flore Paſſionis dicta fol. 21. cerni poſſunt,) ad finem usque Maji menſis eâdem nutritas; tum fixæ manentes in nymphas, atque hinc die Junii 7. in pulchras ejusmodi papiliones transierunt, quarum interius croceo, latus exterius flavo, rubicundo, fusco tinctum erat colore, adſperſo maculis argenteis; quales hic, alteram volitantem, alteram quiescentem, delineavi.

Quæ præterea in foliorum infimo adhuc conſpicitur erucula, viridis, die 12. Februarii an. 1700. apud me in exilem degeneravit aureliam virore perfuſam, unde ſequenti die exigua phalæna cineritii coloris producta eſt, volando velociſſima.

Hæc eſt Volubilis ſiliquoſa Mexicana, foliis plantaginis *Raji, ab Hernande in Hiſtor. Mexic.* Flilxochitl, flos niger & aracus aromaticus, *&* *à Plumerio in tractatu cui titulus Nova plantar. American. genera*, Vanilla flore viridi & albo, fructu nigrescente *vocata. Diverſis adhuc aliis planta à diverſis auctoribus inſignitur nominibus, quæ collecta inveniuntur apud Pluckenet. in Almageſto Botanico pag.* 381.

EXPLICATIO FIGUR. XXVI.

EXhibet ramum arboris *Cacao*, cujus folia ſunt dura, rigida & graminei coloris. Creſcunt hæ arbores altitudine mali, ſimul flores & fructus, tam maturos, quam immaturos ferentes: rubicundi flores utrinque ex ligno progerminant: fructus teneriores cum rubore virideſcunt; maturi vero tanquam citri flaveſcunt, cortice tecti craſſiore, qui ad ſolum pingue reddendum loco fimi adhibetur. Semina ſeu fabæ, antequam in alias peregre transmittantur regiones, in umbra probe ſiccantur. Gaudent agro Surinamenſi atque in eo lubentiſſime excreſcunt hæ arbores; verum culturæ ſunt difficilioris, quoniam alia ſemper ſub arbore latere debent, quæ adverſus magnum ardorem ſolis illas tueatur, huic ferendo non pares: unde fit, ut tenerioribus *Bananas* ſeu *Baccoves* apponantur, quo poſtea iſtarum umbra à nimio æſtu tegi poſſint.

Nigricantes ejusmodi erucæ, rubentibus notatæ ſtriis, qualis virenti folio inhærens cernitur, in hac arbore plurimæ à me repertæ ſunt, illius frondem depaſcentes. Striæ rubicundæ punctulis niveis diſtinguuntur. Torpentes & ſegnes naturâ, die 26. Martii in aurelias, & hinc die 20. Aprilis in phalænas albicantes, ſtriis punctulisque nigris ſuaves, permutatæ ſunt.

Hæc arbor eſt Cacao Cluſii *&* Amygdalis ſimilis Guatimalenſis *B. Pin. neque ad ullum à veteribus deſcriptum genus referri poteſt; quamobrem Cl. Tournefortius inde peculiare in Inſtit. Rei Herbar. genus conſtituit, ubi etiam flores & fructus illius accurate deſcripſit & delineavit.*



P. Sluyter Sculp.

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Explanation of Plate 26th

This is a Bough of the Tree Cacao, ye Leaves of which are tough hard & of a Graſs green they grow to ye Hight of an Apple Tree, & bears at ye same time Flowers & unripe & Ripe Fruit, the Bloſsoms which are red on both sides, sprout out of ye Stem, the unripe Fruit is green and red, but when it is come to Maturity, it is of a Citron colour, it is cover'd with a thick Rind, which sticks firmly to ye Pulp, the Seeds or Beans are Dried up to nothing before they can be brought into any other Country they grow very well without cultivation in ye Fields at Surinam, tho it is difficult to cultivate it because it must always grow by the side of some other Tree to shade them from ye Violent Heat of ye Sun, hence it comes to paſs that they commonly set them at ye same time with ye Bananas or Baccoves, which when they grow up cover them from ye Heat with their Shadow;

These black Caterpillars striped with red, which is upon ye green Leaf, I found in great numbers ~~upon~~ on this Tree on ye Leaves of which they fed; their red streaks were spotted with white. they are naturally sluggish and slow of motion On ye 26th of March they were chang'd into Chrysalis's, & from thence on ye 28th of April, into white Moths, Beautifully striped & spotted with Black.

Annotations

This Tree is ye Cacao of Clusius, & ye Amigdalis similis Guatimalensis of B: Pin: it cannot be referr'd to any Plant which is describ'd by ye Ancients & therefore ye excellent Tournefort in his Inst: rei: Herbar: has made a particular Genus of it, & excellently describ'd & Painted it.

Explanation of Plate 27th.

This Fruit is call'd **Sodom Apples** the Plant is naturally Frightfull to look at by reason of many Sharp Thorns with which it is cover'd all over; ye Leaves themselves not excepted, as if nature by ye Horrid look did give warning to avoid ye Taste, the Plant grows to an Ell & Half or two Ells in Hight, the Fruit or Apples are yellow in this & Red in some, & is Deadly Poison, equally hurtfull both to **Man & Beast**, on ye inside they are full of Red and brown Seeds — The Scarlet Caterpillar Streaked with a deep Red, which is on one of ye upper green Leaves I found on this Plant 24th Septr 1700 it became a brown Chrysalis, which is likewise drawn there, & from which on ye 12th of Octr came a yellow Moth Mottled with brown, which is drawn on ye Leaf. The Worm which crawls on ye Stem was of an Orange colour, it was brought to me by my Negro Maid Servant, who said it would produce a beautifull green Locust. it chang'd into a Brown Chrysalis, which as all Country People assur'd me would become a green Locust, & that the Wings would grow by degrees, but my Chrysalis Dying, I could not observe the change but as others have affirm'd it from their own observations, I could not pass it by, that such as are Lovers of Novelty may find out ye truth.

Annotations

This Plant is call'd by Tournefort in Inst: Rei Herb: Page 149 Solanum Americanum molle folioum &c, & Pluckenet in his Phytographia, Tab: 226 Fig: 1st calls it Solanum Barbadense &c. for tho Pluckenet has made ye Leaves more Hairy it is ye same Plant. Sloane in his Catalogus Plantar: Insul: Jamaic: calls it Solanum pomiferum tomento sum fructu pyriformi inverso.


P. Sluyter sculp.

EXPLICATIO FIGUR. XXVII.

FRuctus hic pomum *Sodomæ* vocatur, natus in planta, quæ ſesquiulnæ vel duarum ulnarum nanciscitur altitudinem, undique, folio etiam non excepto, acutis ſpinis horrida, perinde ac ſi natura præmonitionis addere ſignum voluiſſet, cum in cæteris ad tactum mollia ſint folia. Fructus ſive poma iſthic flaveſcunt, in planta hic producta rubeſcunt, venenata admodum, ſic prorſus, ut homines non minus atque bruta interficiant comeſta: intus ſeminibus, rubentis quodammodo & fuſci coloris, repleta ſunt.

Erucam ſpadiceam cum ſtriis rubicundis, ceu ſuperius virenti irrepit folio, in planta reperi. An. 1700. die 24. Septembris fuſca inde facta eſt nympha, qualis ibidem cernitur; & hæc in flaveſcentem die 12. Octobris tranſiit phalænam, è fuſco maculatam, uti pariter folio inſidens depicta eſt.

Vermis in caule repit, aurantio gaudens colore, quem attulit mihi ſerva Nigrita, ſimul edocens, pulchras inde produci locuſtas. Hic in fuſcam mutabatur bullam, quæ in viride ejusmodi animalculum (ex unanimi incolarum aſſenſu) debebat transformari, ſenſim alis veſtiendum, ad inſtar locuſtæ volantis: attamen cum rotunda hæc nympha morte periret, id ipſum obſervare mihi non licuit. Quoniam autem alii ex propriis obſervationibus de rei iſtius certitudine mihi affirmarunt; hic omnino illud ſilentio præterire nolui, ut ſi qui ſunt novitatis amantes, illis in veritatem inquirendi occaſionem præberem.

Vocat hanc plantam Tournefortius in Inſtitut. Rei Herbar. pag. 149. Solanum Americanum molle, foliorum nervis & aculeis flaveſcentibus, fructu mammoſo, *& Pluckenetius in Phytographia ſua Tab. CCXXVI. Figur. I.* Solanum Barbadenſe ſpinoſum, foliis villoſis, fructu aureo, rotundiore, pyri parvi inverſi forma & magnitudine. *Licet enim villoſiora à Pluckenetio pingantur folia, quam hic ſit, una eademque nihilominus eſt planta. Sloane appellavit illam in Catalogo ſuo Plantar. Inſul. Jamaic.* Solanum pomiferum tomentoſum fructu pyriformi inverſo.

EXPLICATIO FIGUR. XXVIII.

Elegantes & reliquis omnibus majores *Citri* in agris Surinamenſibus ſponte proveniunt. Arbores magnitudine altiſſimas in Europa malos æquant, folia & flores cum vulgaribus citreis plane conveniunt, præterquam quod majores ſint & craſſiores, habito reſpectu ad prægrandes fructus; qui intus parum pulpæ continent, extus craſſisſimo cortice cinguntur, in maturis, ut in vulgari Citro, flaveſcente: conditus hic cortex placentis admiſcetur, & in Belgio *Zuccade*, in Germania *Citronaat* vocatur.

Mirum & prorſus ſingulare animalculi genus in hac arbore reperi, ab erucis omnino discrepans, quod ejusdem foliis veſcebatur, iisque limacum more inhærebat, cum pelle quadam veſtiantur pedes, cujus ope foliis ſe agglutinat. Venenata ſunt animalcula, ita ut membra quoque ab illis tacta rigeant & inflammentur. Die 11. Junii, Anno 1701. exuviis dejectis textum ſtruxerunt, ceu in folio cernis, & ex uno illorum die 27. ejusdem menſis, (me navem Belgium petentem jam ingreſſa,) tam rara erupit exilis phalæna, quam in eodem arboris folio conſpicitur.

Scarabæum nigricantem & ex rubro flavoque pulchriter maculatum fructui propter ejus raritatem impoſui, ut iconem adimpletam magis ornarem: inſecti quamvis incognitam mihi originem aliis inveſtigandam relinquam.

Citri hic ab Auctore deſcriptæ jam ſatis ſuperque in Belgio cognitæ ſunt arbores, non minus uti Limonum ſeptima & decima, atque Granatæ arbor undecima icone depicta; quamobrem de illis haud multa ſubjungenda eſſe duxi.



J. Mulder Sculp.

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Explanation of Plate 28th.

These Beautifull Citrons which are y^e largest species, grow wild in y^e Fields at Surinam, & are as high as y^e tallest Apple Trees of Europe, y^e Leaves & Flowers are exactly ye same with those of other Citrons, & are only larger in proportion as ye Fruit is so; those which have the thickest Rind are ye worst Fruit, it is yellow like ye Rind of other Citrons, & is preserv'd & call'd in Holland Zuccade, in Germany Citrionaat; I found a wonderfull & very singular Insect on this Tree, different from all other Caterpillars; it fed on ye Leaves, & sticks itself to them like a Snail, the Feet being cover'd with a Skin, with ye Flesh of which it sticks to ye Trees, these Animals are very Poisonous, swelling and inflaming those parts which are touch'd by them, On ye 11th of June 1701, it cast its Skin & chang'd into Chrysalis, having made a Bag which is placed on one of ye Leaves, & from one of which (having it in the Ship with me for I was then returning to Holland) On ye 27th of ye same Month came this rare Moth which is drawn on one of ye Leaves; This large black Beetle I have here placed, for ye rarity thereof, on ye Fruit, it was Beautifully spotted with yellow and Red, & is only drawn to adorn ye Picture, for I am intirely Ignorant both of its Original Generation and Metamorphosis.

Annotations

This Citron Tree is already sufficiently describ'd by ye Author, & is as well known in Holland as ye Lemons in ye 17th & ye Pomegranate in ye 11th Plate & therefore there is no need to subjoin any more concerning.

Explanation of yͤ 29th Plate

This large & Beautifull Fruit is call'd at Surinam Pompelmoes, they grow to yͤ Hight of an Apple Tree, and yͤ Fruit is so large & heavy that it endangers the breaking off yͤ Boughs, it is not so sweet as an Orange nor so tart as yͤ Citron, but excells them both in firmneſs of Pulp & Rind, & consequently in deliciousneſs of Taste, these green Caterpillars Lived on this Tree and ate the Boughs thereof; their Head is sky colour'd, & Body cover'd with long Hairs, which are as hard as Iron Wires, the 3d of August they began to stick themselves up, & were chang'd into Chrysalis's spotted with Scarlet from which, on yͤ 19th of yͤ same Month, came these most beautifull Moths of various colours, as black, green, sky colour'd, White, and Burnish'd Gold & Silver; they are of so very swift a Flight, that it is very hard to take any of them, except while they are in the Caterpillar State.

Annotations

This Plant is yͤ Malus Aurantia Indica fructu Omnium maximo Pumpelmus dicto, of which two species are cultivated in yͤ Orchard at Ceilon, & other parts of yͤ East Indies, the only difference being in yͤ colour of Pulp, as Herman: has observ'd in his Catal: Horti Acad: Page 405, where yͤ Plant is also call'd by yͤ same Name.


J. Mulder Sculp.

EXPLICATIO FIGUR. XXIX.

PRægrandis hic & egregius fructus *Pompelmoes* Surinami nuncupatur. Arbores mali creſcunt altitudine, fructuum copia admodum onuſtæ, ſic ut ramos à pondere frangi, periculum ſit. Cedit fructus dulcedine pomo aurantio, minus tamen acidus citreo; vincit utrumque corticis & pulpæ duritie & proin quoque ſaporis ſuavitate.

Inſident arboribus, virentemque earum depaſcunt frondem erucæ virides, quibus caput cœruleum, corpus eſt pilis oblongis onuſtum, ferreo filo non mollioribus. Die 3. Auguſti cœperunt agglutinari, in aurelias ex ſpadiceo maculatas dein permutatæ; unde ejusdem menſis die 19. tam venuſtæ exierunt papiliones, variis pictæ coloribus, nigro, viridi, cœruleo & albo, atque auri & argenti inſtar fulgentes; adeo veloces autem & altivolantes, ut vix niſi per erucarum metamorphoſin capi poſſint illæſæ.

Hæc arbor eſt Malus aurantia Indica, fructu omnium maximo, Pumpelmus dicto, *cujus binas ſpecies diſtinctas in arboreto Ceilonenſi, aliarumque in India Orientali regionum, colunt, conſiſtente ſolum differentia fructuum in pulpæ his ipſis incluſæ colore, veluti Hermannus in Catalogo Horti Academ. ſuo pag.* 405. *annotavit, ubi & hanc arborem prædicto nomine inſignivit.*

EXPLICATIO FIGUR. XXX.

Palma *Chriſti*, in regione Surinamenſi Belgis *Olyboom* vocata, creſcit altiſſime, ſpectatu elegans; flores gerit flavescentes, quos capſulæ ſeminales echinatæ ſequuntur; ſemina initio virentia, matura, ſunt fusca. Si coquatur in aqua ſemen, elicitur & aquæ innatat oleum, quod iſthuc loci non ſolum ad varia vulnera ſananda, verum etiam ad flammas in lampadum ellychniis nutriendas, ut noctu luceant, uſurpatur.

Arboris folia esca ſunt erucæ, quæ ſeminibus ſuperne irrepit, ſubviridis & longioribus pilis albicantibus inſtructæ. Die 3. Maji in aureliam transmutata eſt, uti ſeminibus inhærens cernitur, unde menſis ejusdem die 17. papilio nigricans prodibat, cujus duæ anteriores alæ ſulphureo, duæ poſteriores coccineo erant imbutæ colore.

Nigricans eruca, ex ſeminibus pendens, maculis adornatur flavescentibus, in his aliisque arboribus plurima ſemper reperiunda. More Indorum quaſi in lectis pendulis continentur, unde nunquam integro exeunt corpore. Aliò pabuli quærendi gratià migraturæ, iſtas domus ſuas, ex ſicca arborum fronde ut videtur conſtructas, ritu cochlearum ſecum asportant, quas tum alicubi moraturæ artificio ſingulari affirmare ſciunt. Die Aprilis 14. in nidulo ſuo hæc transfigurata in vilem tranſiit phalænam, natura admodum feram.

Hæc planta eſt Ricinus Americanus major, caule virescente *Hort. Reg. Pariſ. &* Avanacœ *ſive* Citavanacu *Parte II. Horti Malabarici deſcripta.*


P. Sluyter Sculp.

Explanation of Plate 30th

This Palma Christi, is call'd by ye Dutch at Surinam Olyboom, it grows very high & has a beautifull look bearing Yellow Flowers, after which follows prickly Heads that are full of Seeds which are green at first, but brown when ripe, these Seeds being Boil'd in Water, emits an Oyl into which it likewise converts ye Water, This Oyl is not only Used to lay to any kind of wounds, but likewise serves ye Lamps which they burn in ye Night, — The Leaves of this Plant afford Nourishment to ye Caterpillar which creeps on ye Seed, they are Furnish'd with long green & white Hairs. On ye 3d of May they were chang'd into Chrysalis's one of which sticks on ye Seed, from which on ye 17th of ye same Month came a black Butterfly, the foremost wings of which was spotted with Sulphur colour, & ye hinder with Scarlet; The black Caterpillar which hangs on ye Seed is adorn'd with yellow Spots, & is often found in this and other Plants, it Hangs in a Case almost like ye Indians Hammocks, & their whole Body never goes out of it, but when they have a mind to go to any other place in quest of Food, they move along in their House (which is made of a Dead Leaf as it is here drawn) after ye manner of a Snail; by which slow manner, they can go to any place they desire, by a singular instinct of nature, on ye 14th of April, in that House it was chang'd into a Contemptible Moth, of a very Wild Nature.

Annotations

This is ye Ricinus Americ. Major &c of ye Hort: Reg: Paris; and is ye Avanacu or Citavanacu which is described in part 2d of Hortus Malabaricus.

Explanation of Plate 31st

These Roses being brought from ye Caribbee Islands grew very well in ye Fields at Surinam, in the Morning they are as white as Snow, at Noon they are Red, and at Night they drop off; I found these white Caterpillars (which were Spotted with Scarlet) on these Roses as well as ye small Lemon Tree in Page 57. they fed on ye green Leaves and Flowers, I fed them from ye 26th of Augt to ye 30th when they began to stick themselves up & chang'd into Grey Chrysalis's, which on ye 14th Septr 1700 produced two kinds of Butterflies, one of which was yellow & black, the other on ye inside was greenish, but of a black colour, the hinder Wings on ye outside being Scarlet, having yellow Spots and beautifull Marks of Sky colour & Red, which with other particulars, relating to both may be seen in ye Picture.

Annotations

This is ye Rosa Sinensis of Ferrar^s^ in his Flora cultura, & is very properly call'd by Tournefort, Ketmia Sinensis fructu rotundo; it has as many names as there are Authors who have written concerning it, all which are written in my Flora Malab^a^ under the Title of Alcea Arborescens Japonica pampineis foliis Subasperis flore Mutabile Sive Colorem Mutanta &c.



P Sluyter Sculp.

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EXPLICATIO FIGUR. XXXI.

HÆ *Roſæ*, ex Caribicis Inſulis in agros Surinamenſes translatæ, ibi læte creſcunt; niveæ quando matutino tempore aperiuntur, rubicundæ poſt meridiem, veſperi iterum decidunt.

Candidas iſtiusmodi & maculis puniceis ſuaves erucas, qualem folio impoſui, ut in minorum Limonum arboribus icone 17. expreſſis, etiam in his roſis inveni. Præbent escam virentia fruticis folia, quibuscum à 26. ad diem Auguſti 30. illas alui, quando iisdem agglutinatæ, cineritii coloris factæ ſunt nymphæ, die 14. Septembris An. 1700. duplicis generis papiliones iterum producentes. Harum altera nigricat & flavescit, altera latere interiore atroviridi conſpicua eſt, alarum poſticis exterius colore puniceo, maculis flavis, cœruleis & rubicundis diſtincto, pulchre tinctis; quod ad reliqua, pictura in ambabus eadem apparet.

Hæc eſt Roſa Sinenſis *à Ferrario in ſua Florum Cultura hoc nomine deſcripta, optimoque jure* Ketmia Sinenſis fructu rotundo *à Tournefortio nuncupatur. Nomina illa numero plurima, quibus planta hæc à variis Auctoribus proponitur, omnia collecta reperies in Flora mea Malabarica, ſub titulo,* Alcea arboreſcens Japonica, pampineis foliis ſubaſperis, flore mutabili, ſive colorem mutante *Breyn. Prodr.* 2.

EXPLICATIO FIGUR. XXXII.

HÆc planta, Surinamenſibus Belgico idiomate *Slaapertjes* nuncupata, quam i horto meo colui, vulneribus imponitur, quod ad curationem eorum cond cat. Noctu folia plantæ omnia complicantur, binis ſemper ita ſibi invicem junctis ut unum eſſe videantur. Caule prædita eſt duriore, ſex pedum altitudine nascitur flores profert flaveſcentes exiguos, unde oblongæ & tenues emergunt ſiliquæ, plur mo parvo ſemine fœtæ, radix fibroſa albeſcit.

Veſcebantur virenti fronde erucæ, cujusmodi unam frutici inhærere cernis, vi des, roſeis adornatæ ſtriis, & duobus corniculis munitæ. An. 1700. die 20. Maji d ponere exuvias inchoarunt, & colores indutæ magis exaltatos, ſic in aurelias mutat ſunt rubicundas, argenteiſque maculis coruſcas. Hinc vero die 4. Junii ejusmodi p piliones ſpadiceæ & flavo venuſtæ eruperunt, ceu binæ, in aëre volitans, atque plant inſidens, delineatæ ſunt.

Planta hæc à Piſone Lib. IV. cap. 23. *nomine* Paiomirioba ſecunda *deſcribitur*, *&* *in Catalogo Horti Academici Lugduno-Batavi ab Hermanno* Senna Occidentalis, odore opii minus viroſo, foliis glabris obtuſis *appellatur. Quia vero non niſi flore ſolum convenit cum* Senna Alexandrina & Italica; *illa à Cl. Tournefortio jure meritoque refertur ad* Caſſiam fiſtulam Alexandrinam, *ad quam propius florum & fructus ſimilitudine accedit, eique dicitur* Caſſia Americana fœtida, foliis ſubrotundis acuminatis, *quemadmodum pag.* 619. *Inſtit. Rei Herb. legitur.*



P. Sluyter Sculp.

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Explanation of Plate 32d

This Plant which is call'd in ye Dutch Language Sloapenties, I cultivated in my Garden, they use to lay it to Wounds, which very much forwards their cure, In ye Night time all ye Leaves are shut up, Joining two & two together, so that they seem to be but one; the stem is very hard, It grows commonly 6 Foot high, & bears small yellow Flowers, after which follow, long Narrow Pods full of Seed, the Root is White & Stringy; — These Green Caterpillars, which are drawn on ye Fruit, fed on ye green Leaves, they have two Horns, & are adorned with Rose colour'd Stripes, On ye 20th May 1700, they cast their skin (the new one being much finer colour'd) and chang'd into Red Chrysalis's, with Spots like Burnish'd Silver, from which (June ye 4th) came these Beautifull Butterflies of Glorious scarlet & yellow colours, which I have drawn both Flying in ye Air & resting on a Branch of ye Plant.

Annotations

This Plant is ye Paiomirioba Secunda describ'd by Piso, Liber 4. Cap: 23, it is call'd by Herman in his Catal: Hort: Academ: Lugdun: Batav: Senna Occidentalis &c. but because it agrees in nothing except ye Flower, with ye Senna Alexand.a & Italica, therefore ye excellent Tournefort has Justly referr'd it to ye Cassia fistula Alexand.a with which it agrees both in Flower & Fruit, & in his Inst: Rei: Herb: Pg 619 calls it ye Cassia Americana foetida, foliis Subrotundis Accuminatis.

Explanation of Plate 33^d

This Plant is ye American Fig, which being exactly ye same in all respects with ours in Europe there is no need to describe it, they grow very easily & in great Numbers in ye Fields at Surinam, & being cultivated by ye Inhabitants, they are very much Propagated, the Fruit is pleasant & cooling & very beneficial to ye Inhabitants of those Hot Countries. - These Caterpillars (which I have drawn on ye Lower part of ye Picture) feeding on ye green Leaves and Fruit, I found on this Tree, On ye 22^d of March they cast their Skin, & chang'd from their first colour, (being Green-striped with yellow) into Orange colour striated with Red, so that they appear'd different from what they were before, after this they Ate no Food, but by degrees were chang'd into Liver colour'd Chrysalis's, from which on ye 12th of April 1701, came these most Beautifull Scarlet Moths, One of which is drawn Flying at ye Top of ye Picture; a few days after which another came out, of a much more obscure colour, & differently Mark'd from ye other, This is drawn on ye Top of the Stem.

Annotations

It seems needless to add any thing of this Plant. The Tree & Fruit is so well known in Europe where y^e same sort grows, yet there are divers species of them, which differ in y^e bigness of y^e Fruit, & may be seen in y^e Inst: rei: Herbar: of Tournefort page 262 & 263.



P Sluyter Sculp.

EXPLICATIO FIGUR. XXXIII.

QUandoquidem *Ficus* Americanæ, omni ex parte ſimiles illis ſunt, quæ in Europa reperiuntur, iſtas ut deſcribam, plane non erit opus. Majori copia in agris Surinamenſibus crescere facillime poſſent, modo ab incolis cultæ magis propagarentur; cum fructus ſint adeo ſuaves atque refrigerantes, calidas regiones inhabitantibus longe utiliſſimi.

Erucas inferius appoſitas, virentia folia depascentes, ex his arboribus collegi. Die Martii 22. ex viridi colore cum ſtriis flavescentibus, in aurantium rubicundis ſtriis per totum corpus inſignem, transmutatæ ſunt, capite inſuper & cauda nigrescente, ita ut nova pictura veſtitæ à priſtinis plane diſſimiles viderentur erucæ. Neque etiam poſt hanc metamorphoſin ullum amplius ſumebant pabulum, ſed in nymphas hepatici coloris pedetentim transibant, unde An. 1701. die April. 12. phalænæ ſpadiceæ prodierunt tam elegantes, quam in una volante ad ſummitatem iconis potuit exprimi. Hanc paucis diebus poſt inſecuta eſt alia, colore multò obſcurior, aliterque maculata priore, quemadmodum in caudicis apice hærens oſtendit.

Multa de hac planta ſubjungere mihi res videtur omnino ſupervacanea, quippe cum in Europa, quænam ſint arbores Ficus, quinam ejusdem fructus, unicuique ſatis ſuperque innotuerit. Diverſarum tamen ſpecierum illius plures inveniuntur, fructuum differentia maxime inter ſe discrepantes; veluti apud Tournefortium in Inſtitutionib. Rei Herb. pag. 262. & 263. legitur.

EXPLICATIO FIGUR. XXXIV.

UVæ, tam rubro & cœruleo, quam viridi & albo acino, læte admodum citoque in terris Surinamenſibus creſcunt; adeo ut palmes abſciſſus, ſoloque mandatus, ſex menſibus elapſis uvas proferat maturas, & ſic totius anni decurſu fructus carpi queat, ſi idem propagandi modus ſingulis menſibus repetatur. Dolendum ſane, iſthuc loci non habitare, qui huic culturæ ſtudere ament; vinum quippe Surinamum transferri non foret opus, quin potius inde in Belgium transvehi illud poſſet, cum quotannis vindemias ſæpius ita colligendi daretur opportunitas.

Erucas iſtiusmodi, qualem in Tabula ſimul expreſſi, d. 26. Auguſti folia vitiginea depaſcentes reperi. Spadiceo & ſuaviter candicante colore nitidæ erant, reptatu celeres, paſtu voraces, atque hinc copioſa & coacervata excrementa: poſtremum corporis ſegmentum macula nigricans diſtinguebat, cujus medium nivea pellicula cryſtalli inſtar ſplendente conſpicuum erat, quæ quoties reſpirabat inſectum, alternatim elevabatur rurſusque concidebat. Arbitratur in erucis plures ſe obſervaſſe oculos Leuwenhoekius, uti ſcriptum legitur Epiſtola 146. à pag. 430. ad 452. verum mihi eosdem detegere nondum contigit, tametſi erucas ingentes ſæpius habuerim. Die 26. Auguſti, Anno 1700. una ex his in pampino pulchre contortiplicato, ſueta erucis metamorphoſi, aurelia facta eſt: die 15. Septemb. elegans inde phalæna emerſit, viridis, ſed alarum poſticis colore cœruleo & rubicundo inter ſe mixtis picta.

Quandoquidem Vitis in Europa ad neceſſitudinem rei ſatis cognita jam eſt, & plures, quam in America, uvarum ſpecies diverſæ multo labore coluntur; de illis aliquid addere haud neceſſum erit.



34

Explanation of Plate 34th

These Grapes grow excellently well in a short time at Surinam, the Stones of some of them are Red & Sky colour'd, in others green & White, & if a Bough be cut off a Vine, & set in ye Ground, in ye Space of Six Months it will bear ripe Fruit by this means they might have Grapes all the Year round, if they would take ye pains to set them every Month, & it is great pity that, those places are not Inhabited by some who delight in the Study of those things, for then there would be no need to send Wine to Surinam, but on the contrary they might export it from thence to Holland if an Opportunity offer'd to take it at ye time of Vintage.

These Caterpillars (one of which is drawn on ye Picture) I found on ye 26th of August feeding on ye Vine Leaves, They had a beautifull & Shining Scarlet & white colour, were swift of motion & in Eating voracious, their Dung being very Large & laid on Heaps; In the hinder Joint of their Body, they have a black Spot, in the middle of which the Skin is white, & shines like Chrystal, & lifts up & down as ye Caterpillar breaths; Leuwenhoek in his 146th Epistle (from Page 430 to Page 452) says he has observ'd (in his Judgement) many Eyes in these Caterpillars, which I could never yet discover, tho I have had several very large Caterpillars of this sort, On ye 26th of August 1700, it spun itself up very Artificially in one of ye Vine Leaves, & after ye manner of other Caterpillars changed into a Chrysalis, which on ye 15th of Septem: following produc'd a beautifull Green Moth, ye hinder part of whose Wings, was mix'd with Red & Sky colour.

Annotations

This Vine being so well known in Europe, & many more Species cultivated (with great care) than are in America, it is needless to say any more of it.

Explanation of Plate 35th

Here is represented a Bough of a Tree which grows in ye Thickets at Surinam, ye Fruit of which hangs to one another, like ye Rosaries or Beads of ye Papists, The Flowers are Peach colour'd, & ye Fruit green, hanging Seven or Eight in a Bunch, Join'd the one to ye other, This kind of Caterpillar (which I have here drawn to ye Life) I first found on this Tree, they are Red spotted with brown, I afterwards found them in great Numbers on ye Cocoa Palm Tree (which I would not insert among my Works, as well because it has been already sufficiently describ'd & drawn by others, as that it would not suit with ye bigneſs of this Paper) in this Palm they make their Habitation, by Spinning a Sack or Bag of almost half an Ell in Length, of an Oker colour, & Wove thick & close; I carried it Home to my House & afterwards hung it upon one of ye Leaves of this Tree, a Bough of which is here drawn, This Bag was full both innumerable living Caterpillars, & of ye cast skins of others, & I observ'd that, in ye Day time they kept within & at Night went out in search of Food, I having hung their Bag close by ye Fruit; In ye begining of April they stuck themselves on, & about this Tree, & were changed into Chrysalis's of Beautifull colours, which on ye 14th 15th & 16th of that Month, produced yellow Butterflies spotted with Scarlet, I also observ'd Hairy brown Caterpillars on this Tree, which fed on ye Leaves, on ye 9th & 10th of April they Spun themselves up in Bags, & on ye 23^d produced small transparent Butterflies, which are drawn at ye bottom of ye Leaf & were Beautifully spotted with black.

Annotatations

I am of Opinion that this Plant was never yet describ'd or drawn by any Author except this, but in my Judgement it should be call'd Coronilla Americana Arborescens floribus dilute rubescentibus.



35

EXPLICATIO FIGUR. XXXV.

ICone hac repræſentatus ex arbore ſylveſtri ramus eſt, cujus fructus, tanquam globuli roſariorum apud Pontificios, ſibi invicem juncti cohærent. Flores ut Mali Perſicæ colorati ſunt; fructus viridescentes, ſeptem vel octo numero conjuncti pendent.

Erucarum iſtius generis, quod hic ad vivum delineavi, prima in hac arbore à me reperta fuit, rubicunda & fuscis maculis inſignita. Poſtmodum easdem ingenti copia vidi in Palma Coccos ferente, quam Operi meo inſerere nolui, tum quod ab aliis jam ſatis deſcripta & depicta ſit, tum quod ob magnitudinem nimiam huc non quadret. In hac Palma ſacculum compoſuerant, ſeu tela ducendo formaverant, jam dictæ erucæ, qui longitudine ad dimidiam fere ulnam accedens, colore ochræ ſimilis, arctus & denſe contextus erat, innumeris tam erucis, quam erucarum exuviis repletus. Ego vero ad ædes meas asportatum, folio arboris hic exhibitæ poſtmodum appendi ſacculum, ulterius erucarum mores inveſtigatura: atque ſic de die illas in ſacco manere reconditas, noctu autem ad pabulum quærendum emigrare obſervavi, ſacculo proxime ad fructum ex folio pendente. Menſis Aprilis initio his arboribus & circa easdem agglutinatæ in nymphas transformatæ ſunt eleganter tinctas, quæ diebus 14. 15. & 16. Aprilis papiliones flavos, puniceis maculis conſperſos, produxerunt.

Eruculas hirſutas & fuscas, comam virentem depascentes, pariter in eâdem arbore obſervavi. Die 9. & 10. Aprilis telæ ſemet incluſerunt, & die 23. ejusdem menſis papiliunculi transparentes inde prodierunt, ex atro pulchriter maculati, qualem inferius ad plantam delineatum dedi.

Hanc plantam apud neminem hucusque vel deſcriptam vel icone expreſſam videre mihi contigit, præter hanc Auctorem noſtram; meoque judicio nuncupari poſſet, Coronilla Americana arborescens, floribus dilute rubescentibus.

EXPLICATIO FIGUR. XXXVI.

PLantam hanc cum in dumeto reperiſſem, nulla vero iſthuc loci reſecari poſſit, quin ſtatim marcescat, illam ab Indo ſervo è terra cum ſua radice effosſam, domum transferri, & in hortum meum locari curavi. Albiſſima gaudet radice, Nicotianæ aliàs quodammodo ſimilis, florem profert candidum, Hyacinthi radice tuberoſa Cluſ. æmulum, quo deciduo, poſt elapſum ſex menſium tempus iterum floret. Nomen & vires ejus prorſus ignota ſunt Surinamenſibus, quippe quos talia inveſtigandi nulla tenet cupido; quin me alia præter ſacchari arundinem in agris quærentem deridebant, cum tamen in vepretis longe plura meo judicio detegi poſſent, modo hæc esſent pervia: tot enim carduis & ſpinis denſa horrent, ut mancipia ſecuri armata præmittenda eſſent, ad aperiendum mihi transitum quodammodo penetrabilem, qui nihilominus mihi erat difficillimus.

Puniceam & ex albo nigroque eleganter variegatam erucam foliis plantæ vesci obſervavi. Anno 1701. die Aprilis 14. in aureliam, atque hinc porro die 26. ejusdem menſis in fuscam & candicantem papilionem, quatuor maculis aurantiis in ala poſteriore utraque inſignem, transformata eſt.

Inhærebant eidem adhuc plantæ albicantes quædam beſtiolæ, depoſitas exuvias in corporis poſtico circumgerentes, quibus pediculi virides, à Gœdartio Part. I. pag. 90. deſcriptæ, esca erant in hac planta. Ipſis Calendis Aprilis textum ſibi ſtruxerunt, unde die decimo poſt muscæ hujusmodi coloris lignei evolarunt.


P. Sluyter sculp.

Explanation of Plate 36th.

I found this Plant in ye Hedges at Surinam, from which it could not be rooted out, tho it soon Died; But having caus'd my Indian Servant to dig one of them up by the Roots, I carried it Home & cultivated it in my Garden, it had an Exceeding white Root, but otherwise resembles ye Nicotiana or small Tobacco, It bears white Flowers, which are like ye Hyacinthus radice tuberosa of Clusius, & when they fall off, in six months time they Flower again, They are Ignorant both of its name & Virtues at Surinam, for there is no one there, who is desirous of ye Knowledge of such things, but Laugh'd at me for seeking after any thing that grows in ye Fields, except ye Sugar Cane. yet in my Opinion they themselves ought to have sought after ye Briers more than they did if it were for nothing but to keep ye ways passable, for those paths thro which at my first Arrival there, one might pass without much difficulty, were now become frightfull & Impenetrable with Thorny & Prickly Thistles, I observ'd this Scarlet Caterpillar, (beautifully varied with Black, & White) feeding on ye Leaves of this Plant, On ye 14th April 1701 it changed into a Chrysalis & from thence on ye 26th into a Brown & white Butterfly with four Orange colour'd Spots in each hind Wing; also on this Plant feed certain small Insects, which (like ye Green Lice describ'd by Goedart in part 1st pg 90) carry bits of their cast Skin upon their Tail, In ye begining of April they spun up in Bags, which after Ten Days produc'd Flies of a Wood colour.

Explanation of Plate 37th

This Plant is call'd at Surinam Okkerum, & is ye Marsh Mallows so well known to Botanists, it grows to ye Hight of a Tall Man, & bears double Flowers some of which are yellow & white, & others red, if ye Fruit be cut a Milky Liquor drops out (and Hangs together in stillicides or Threads) which they boil & make a Drink of in America; The small Caterpillar which creeps about this Plant fed on ye Leaves, On ye 17th of June 1700, it Spun up in a Bag & chang'd into a Chrysalis, which is placed on ye Fruit & from which on ye 28th of ye same Month came a small Reddish Moth; On ye green Leaf Sticks a small white Worm, Spotted with Black, which Lived on this Plant, & on ye 1st of March, chang'd into a small Winged Animal, which being very lightly touch'd leaps away.

Annotations

This Plant is ye Ketmia Brasiliensis folio ficus &c, of Tournefort in Inst: Rei Herb: & is call'd by my Father John Commelin in pt 1st of Hort: Amstel: (where it is drawn) Altea Americana Annua Flore albo &c, & by Marcgrave in Hist: rer: nat: Brasil: Quingombo Lusitanis Congensibus & Angolensibus &c.



P. Sluyter Sculp.

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EXPLICATIO FIGUR. XXXVII.

HÆc planta Surinami *Okkerum*, aliàs *Althæa* nuncupari ſolita, Botanicis abunde cognita eſt. In altitudinem viro majorem excreſcit; duplici gaudet flore, & ex albo flaveſcente, & roſeo; fructum ſi disſecueris, lentor tenacitate quaſi fila ducens effluit, coctus vero cibum præbet mancipiis in America.

Erucula plantæ irrepens, ejusdem fronde paſcitur. Die 17. Junii Anno 1700. telæ involuta in nympham coloris hepatici permutata eſt, qualis fructui adjacet, unde menſis ejusdem die 28. exigua rubeſcens phalæna prorupit.

Virentium foliorum infimo albicans inhæret beſtiola, nigris notata maculis, quæ in planta iſta vivit, atque die 1. Martii in animalculum alatum mutata eſt, quod attactum vel leviſſimum ſaltu effugiebat.

Hæc planta dicitur Ketmia Braſilienſis, folio ficus, fructu pyramidato, ſulcato, *à Tournefortio in Inſtit. Rei Herb. à Patruo meo Joh. Commelino*, Alcea Americana annua, flore albo, maximo, fructu pyramidali, ſulcato, *ubi delineata eſt Part. I. Hort. Amſtelod. à Marcgravio in Hiſtoria rer. nat. Braſil.* Quingombo Luſitanis Congenſibus & Angolenſibus Quislobo.

EXPLICATIO FIGUR. XXXVIII.

Reperi hanc plantam in terris Surinamenſibus ſponte nascentem, octo pedum altitudine: exiguos obſcure rubentes producit flores, capſulæ ſeminales tripartitæ ſunt, earum qualibet unicum ſemen continente, quod initio viride, poſtea fuscum evadit. Extremam virentium foliorum oram cingunt fibrillæ quædam, pariter virideseentes, & ſingulæ capitulo aliquo munitæ, qui purgationibus ac enematis præparandis inſervit: decoctorum etiam capitulorum aquam illis exhibere ſolent, qui morbo ibidem populari, nomine *Beljak*, infeſtantur.

Folia hujus plantæ, ſimiliter ut Anonæ no 14. deſcriptæ, esca fuerunt ingentis illius ac viridis erucæ, quæ famelica licet atque vorax, copia tamen excrementorum minimas non excedebat eruculas, validis corporis motibus quaſi reverberans, ubi tangeretur. Die 23. menſis Junii immota hærens exuvias, quas folio impoſitas cernis, & viridem cum iis colorem depoſuit, rubicundo tunc quodammodo tincta. Altera die poſt in hepatici coloris mutabatur aureliam, proboscide exterius inſtructam, uti delineata infra cauli adjacet; quæ inquieta admodum per quadrantem fere horæ continuis ſe jactitabat contorſionibus. Die 20. Auguſti Anno 1700. magna inde phalæna erupit, corpore ſex aurantiis orbiculis ornata, quatuor vero alis & ſex pedibus nigra elegantiſſimeque variegata. Proboscis illius ex duobus conſtat canaliculis, quos ita jungere ſibique invicem applicare ſcit hoc phalænarum genus, ut unica veluti formetur fiſtula, & illæ mel ex floribus per eandem attrahere poſſint; quo exſucto proboscidem in orbem arcte convolutam ſub capite inter oculos recondunt, ſic prorſus, ut vix ibi rurſus inveniri queat. Fortes ſunt, & difficulter ſatis necantur, ovula ponunt albicantia copioſiſſima.

Minorem eruculam ſuperius icone expreſſam eadem plantæ fronde alui, usque dum in aureliam d. 6. Maji, ceu ſupra in caule jacet, atque hinc die 20. ejusdem menſis in aurei coloris papiliunculum, nigricante limbo cinctum, transformaretur.

Planta hæc eſt Ricinus Americanus perennis, floribus purpurascentibus, Staphidis agriæ foliis, *Part. I. Hort. Amſtelod. deſcriptus; merito autem à Tournefortio in Inſtit. Rei Herb. ad aliud refertur genus atque* Ricinoides, Staphiſagriæ folio, *nuncupatur. A Casp. Bauhino dicitur* Ricinus Americanus, folio Staphiſagriæ, *& à Pona*, folio ficus.


J. Mulder. Sculp

Explanation of Plate 38th

I found this Plant growing Wild in ye Fields at Surinam, to ye Hight of 8, Feet it bears small obscure Red Flowers, the Heads of Seed are split into three parts each of which contains one Seed or Kernel, which at first is green, but afterwards Brown, the green Leaves are Edged round with Fibres, on each of which is a round Head, which are likewise green, & are made Use of in Purges & Clysters, and ye Decoction of them is given to those who are troubled with a Lethargic Disease call'd Beljak. — The Leaves of this Plant are Food to large green Caterpillars which likewise Feed on ye Anona in Page 14th; they always are hungry & ravenous, tho their excrement is not larger than that of ye smallest Caterpillar, when they are touch'd they give a strong motion, or shaking with their Body; the 23d of June they became without motion casting their Skin (which is drawn on one of ye Leaves) and with it their green colour, becoming reddish, the next day it chang'd into a Liver colour'd Chrysalis, having a Proboscis on ye outside (as it is drawn on ye lower part of ye Stem) & which kept Writhing about, & was very unquiet for almost a quarter of an Hour after ye change; On ye 20th Augt 1700, came this large Moth, whose Body was adorn'd with six Orange colour'd Spots, the Four Wings & six Feet being Elegantly Marbled with Black, its Proboscis consists of two Pipes which these Moths can Join together, so as to form one Tube, thro which they suck ye Honey from ye Flowers, which being extracted, they Wind up their Proboscis under their Head among ye Hairs so close that it can hardly be perceiv'd, they are strong & difficult to be caught, and lay very large Numbers of White Eggs.

The other small Caterpillar on ye top of ye Plant, Fed also on ye Leaves, on ye 6th May it changed into a Chrysalis, which on ye 20th produced a small Gold colour'd Butterfly, Circled round with black.

Annotations

This is ye Ricinus Americanus perennis &ca describ'd in Pt 1st of Hort: Amst: Tournefort in Inst: Rei: Herb: it is Justly referr'd to another kind & Ricinoides &c by Casp: Bauhin it is call'd Ricinus Amer: folio Staphisagrie by Pona folio ficus.

Explanation of Plate 39th

This Plant grew in my Garden at Surinam, but no one could inform me either of its name or virtues, it Was a full Ell in Hight & bore small yellow Flowers.

I found Large green Caterpillars spotted with white, Black & Red, on this Plant, Eating ye green Leaves, at ye end of May they spun up in Bags, which are placed on ye Stems & changed in Scarlet Chrysalis's inclining to a Liver colour, from whence on ye 20th June, came this one grey Moth, spotted with black & White, the rest all Died.



P. Sluyter Sculp.

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EXPLICATIO FIGUR. XXXIX.

HÆc in horto meo Surinami progerminavit planta, nemine vel vires ibi vel nomen ejus me docente. Altitudine plenæ creſcit ulnæ, floſculos producit flaveſcentes.

Erucas in hac planta reperi prægrandes, ejuſdem folia depaſcentes, colore virides & ex albo, nigro & rubicundo maculatas. Sub finem menſis Maji telæ, qualem cauli appoſui, ſe ipſas involverunt & in puniceas coloris hepatici aurelias mutatæ ſunt: unde menſis Junii die 20. unica hæc exigua emerſit phalæna, cinerea & nigris albicantibuſque maculis inſignita, reliquis omnibus mihi morte ereptis.

EXPLICATIO FIGUR. XL.

DUplex eſt ſpecies arboris, cujus hic delineatum exhibeo ramum, altera fœcunda, ſterilis altera; hæc mas dicitur, & flores tantum viſu ſuaviſſimos profert, plena ſemper denſis florum racemis; illa, quam hic cernis, fœmina vocata, ex caudice albos protrudit floſculos, unde fructus enaſcuntur. Admodum differunt fructus illi tum figura, tum magnitudine; quidam ovati ſeu ex oblongo rotundi ſunt, alii contra magis globoſi, & rurſus nonnulli majores, alii vero minores. Lacteus effluit liquor, ſi incidantur fructus, ſemine nigro intus ſcatentes: grati quoque ſaporis ſunt, ipſoque in ore ſumti liquescunt. Maturi flaveſcunt, cocti autem, quando maturitatis medium circiter attigerunt, optimarum inſtar raparum ſapiunt; quin & ſolum in aqua decoqui, poſtea conſcindi & ſic manducari ſolent. Truncus veluti caulis braſſicæ mollis eſt, interne cavus, quamobrem ad canales inde parandos, pro excipienda in tectis aqua pluviali, adhibetur. Brevi quidem tempore in altum excreſcit arbor, caudice recto, & ſpectatu jucunda, ſed brevi etiam rurſus perit. Folia ſuperius ex apice trunci emergunt, quem eleganti ſpectaculo uti corona diſperſa cingunt: iſthuc loci Arbor *Papaja* nuncupatur.

Erucas albicantes obſervavi non paucas in apice proceræ iſtius arboris, quam, ut easdem colligerem, penitus feci detruncari, quia tum ob altitudinem nimiam, tum propter cavitatem ſuam conſcendi nequit. Virenti fronde ejusdem arboris alui erucas, ad decimum usque diem menſis Junii Anno 1700. cum tela circumtextæ in aurelias hepatici coloris mutatæ ſunt, cujusmodi in caule fructus conſpicitur; atque hinc die 3. Julii exiguæ prodierunt phalænæ, qualis ipſi fructui inhærens cernitur.

Alias præterea flaveſcentes erucas, ſtriisque hepatici coloris obductas, in ſummitate hujus arboris & reperi, & collectas iisdem foliis nutrivi, donec Aprilis die 6. fixæ in aurelias, & poſtea die 20. ejusdem menſis, in albicantes ejusmodi papiliones, ceu volitans in aëre delineata eſt, transformarentur.

Binæ iſtæ arbores, mas & fœmina, pulchre depictæ & deſcriptæ ſunt Part. I. Hort. Malabar. Illarum denominationes dantur plures, quas omnes in mea Flora Malabarica ſub titulo Pepo arboreſcens & Papaja Orientalis *Columnæ*, *atque* Pepo arboreſcens mas, ſeu ſterilis *Parad. Bat. Prodrom. congregatas invenies.*



P. Sluyter Sculp.

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Explanation of Plate 40th

Here is represented ye Bough of a Tree of which there is two Species one of which is Barren, & is call'd ye Male, ye Boughs of which are full of Beautifull Flowers, ye other or Female which is Fertile is here Painted, it Shoots White Blossoms out of the Stem, from which the Fruit proceeds, some of which differ from others both in Shape & bigness some being Oval, others rounder, again, some are Large, others small; when ye Fruit is cut it emits a Milky Liquor, & within is full of black Seeds; it is of a pleasant taste & Melts in ye Mouth when Eaten, when they are quite ripe they are yellow, & if they are Boil'd when Half ripe, they taste like ye best Rapes, ye Stem of ye Tree is soft like ye Stalk of a Cabbage, & being Hollow is used for Pipes to carry ye rain Water into Cisterns which they have on ye Tops of their Houses, it grows in a short time to a High Tree, with a Strait Stem and pleasant look, but soon Dies again it puts forth Flowers from the Top of ye Stem, which when blown surrounds it like a Coronet, which looks very pretty, In this place it is call'd ye Papaja Tree; Of these White Caterpillars, I observ'd not a few on ye Top of this high Tree, & that I might more easily collect them, I caused ye Tree to be cut down, both because of its Hight, & that being Hollow it did not require much Labour, I fed them with green Leaves of it till June 20th 1700, when they spun up in Bags & changed into Liver colour'd Chrysalis's which are placed on ye Stem, & on July 3d produced small Moths which are drawn on ye Fruit, I also found yellow Caterpillars striated with Liver colour'd on ye Top of this Tree, & fed them with ye Leaves, till April 6th it changed into a Chrysalis, & from thence on ye 20th into a White Butterfly wch is drawn Flying.

Annotations

both ye Male & Female of this Tree are Elegantly describ'd & drawn in pt 1st of Hort: Mal: its many names are collected in my Flora Malab: under ye Pepo Arborescens &ca & ye Pepo arbs mas seusterilis in Prodrom: Parad: Bat:

Explanation of the 41st Plate

This Potato Root, is of a Paler Red colour than ye Red Beets with a Rape Root of C: B: in Europe and are prepar'd after ye same manner being boil'd with Meat; It tastes like ye Chesnut but has not so sweet a smell, it grows so quick that in a short time it will from one Root, run over a whole Field, for it creeps up any Plant like ye Bindweed, & therefore I have drawn it about this Cane or Reed, which grows about the Banks in those places & bears Red and yellow Flowers, The Potato Flowers are Sky colour'd, & if a Twig of it touches ye Ground it again takes Root, so that this Plant is Propagated in great Numbers, both by the Roots Twigs & Seeds;

The Caterpillar which creeps which creeps on ye Leaf of ye Reed feeds upon both these Plants, it was four square, green & yellow, & furnish'd with small round Heads or Balls which were Red; its Feet & small Holders are cover'd with a sticky & Transparent Skin, as is likewise ye Belly, so that when it moves none of ye Feet are seen, & by ye help of it, they stick themselves to ye Trees like a Snail, On ye 22d of June they made a Bag of an Oker colour, from which Augt 23d came a Scarlet Winged Animal, Elegantly Striated with a Golden Yellow which is drawn Flying, at ye Top of ye Picture; On the Potato Leaves likewise fed small green Caterpillars, of which I have drawn one on ye Leaf, & another on ye Stalk, I found them also in great Numbers on ye Leaves of ye Cucumber, running to & again, with great swiftness, at ye last they became of a Pale Rose colour, & on ye 24th Augt Spun up in thin White Bags & became Chrysalis's which on ye 29th 30th & 31st Days produc'd two kinds of small White Moths, mix'd with yellow & circled round ye Edges with Scarlet as in ye Picture, one is drawn resting, and ye other Flying.

Annotations

The Reed which is here drawn is ye Cannacorus &c. of Tournefort in Insti: & ye Canna Indica &c. in Herm: Catal: The Bindweed is call'd in Hortus Mal: Kappakelongu & by Clusius Batatas sive Camotes &c: the many Names by which divers Authors have describ'd this Plant are collected in my Flora Mal: under ye Title of Convulvulus Indicus &c. I believe our Author is ye first who has drawn its Flowers, yet Piso mentions that it bears Flowers like ye Bindweed, Clusius is Ignorant whether it bears either Flowers or Fruit, but Marcgrave denies both, Authors have Justly referr'd it to ye BindWeed as this Picture shews, Hernandes in his Mexn Histy describes a species of it by ye Name of Cacamotic Hanoquiloni Seu Batata Purgativa &c.……………



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EXPLICATIO FIGUR. XLI.

RAdix hæc, *Battattes* dicta, rubedine paulo dilutiore tincta eſt, quam radix Betæ rubræ radice rapæ C. B. in Europa: eodem autem modo atque hæc præparatur, vel carni juncta etiam decoquitur, ſapore valde ad Caſtaneas accedens, teneriore tamen illisque adhuc ſuaviore. Citò adeò creſcit & augetur, ut integrum agrum brevi temporis ſpatio unica repleat radix. Inſtar Convolvuli ſcandit planta, quâ de re & hic delineatam Arundini cuidam circumduxi, quæ pariter in iſtis regionibus circa ripas naſcitur, floribus cum rubore flaveſcentibus ornata. Cœrulei ſunt flores hujus *Battattes*; cujus ſi terram tetigerit ramus, rurſus ibi radices agit, hac ratione per radices, ramos & ſemina planta multum propagata.

Eruca hujus arundinis irrepit folio, quæ utraque veſcebatur herba. Plane quadrata erat, è flavo viridis, capitulis inſtructa globoſis & rubentibus; pedes ipſius & exiles ungulæ tenui & pellucida continebantur pellicula, quæ totius etiam ventris erat tegumentum, ſic ut in reptatu nulli pedes apparerent, verum ubique, inſtar limacis, ope hujus cuticulæ agglutinaretur eruca. Die 22. Julii textum colore ochræ ſibi ipſi ſtruxit, unde die Auguſti 23. ejusmodi alatum prorupit animalculum, puniceum atque ex aureo flavo eleganter ſtriatum, quale ad ſummitatem iconis volitans delineavi.

Folia *Battattes* eſcam præbuerunt minori virideſcenti eruculæ, cujus generis hic binas, & in caule, & in folio, repentes expreſſi, plures vero etiam in Cucumerum fronde obſervavi, tum antrorſum, tum retrorſum reptando celerrimas. Ad extremum roſeum indutæ colorem, in tenui albicante texto ſibi ipſis ſtructo die 24. Auguſti aureliæ ſunt factæ: hinc diebus 29. 30. 31. Auguſti duplex papiliunculorum ſpecies emerſit, candicans & flava, margine cincta puniceo, velut icon exhibet, alteram quieſcentem, alteram volantem.

Arundo hâc Tabula depicta eſt Cannacorus flore coccineo ſplendente *Tournefortii Inſtit. Rei Herb.* Canna Indica flore fulgenti Cocco ſplendente *Herm Catal.* Convolvulus *autem eidem circumvolutus arundini* Kappakelengu *in Horto Malabar. dicitur*, *&* Batatas *ſive* Camotes Hiſpanorum *apud Cluſium audit, nomine, quo illum deſcribit. Plurimas denominationes, quibus à variis proponitur Auctoribus iſte* Convolvulus, *reperies collectas in Flora Malabarica mea ſub titulo*, Convolvulus Indicus, radice tuberoſa eduli, cortice rubro, Batatas dictus, *Parad. Bat. Prod. Hucusque tamen, quod ſciam, præter Auctorem hujus Operis, nemo flores hujus plantæ delineavit; tametſi in Hiſtoria ſua Naturali ſcripſerit Piſo, plantæ* Batata *dictæ ſpecies producere florem inſtar* Convolvuli. *Cluſius reſcire nunquam potuit, qualem hæc planta vel florem, vel fructum proferret, quin Marcgravius utrumque in illa naſci, negat: ut adeo ex hac figura clare pateat, merito à variis Auctoribus eam inter Convolvulos referri. Hernandes in Hiſtoria ſua Mexicana in cognata quadam ſpecie, quæ* Cacamotic Tlanoquiloni ſeu Batata Purgativa *ab ipſo vocatur, flores ſimiles* Convolvuli *floribus repræſentat, quos eidem plantæ etiam Piſo & Marcgravius tribuunt.*

EXPLICATIO FIGUR. XLII.

FLos hic dictus Moſchatus, Belgice *Muſcus-Bloem*, in planta octo circiter pedes alta creſcit, ſubflavus, nullius odoris; ubi decidit, grandis producitur capſula ſeminalis, plena intus ſeminibus fuſcis, quæ fortem Moſchi odorem ſpirant. Virgines iſta filis ſericeis excepta brachiis circumdant, more ſuo ſe ipſas ornaturæ: foliis ad ſaginandos gallinarum Indarum pullos utuntur.

Viride quoddam & ex atro ſtriatum Erucarum genus, ceu in capitulo floris ſuperius hæret, in hac planta obſervavi, quod virenti ejusdem fronde paſcebatur. Die 20. Martii in aurelias punicei coloris, qualem proxime ad erucam poſui, transmutatæ, hinc die 2. Aprilis in phalænas albicantes transierunt, cujusmodi unam ad ſummitatem iconis volantem delineavi.

Menſe Julio inſequente aliud adhuc erucarum genus in eàdem planta reperi, quod etiam in Guajava Tab. XIX. exhibita prævideram, nigricans & è flavo ſtriatum, capite & cauda rubens. Die 10. Julii tenui ſe incluſit texto, atque in exiguam transiit aureliam; unde 26. ejusdem menſis die papiliunculus, ſtriis ad cœruleum accedentibus elegans, productus eſt, velut infra in figura expreſſi.

Planta hic exhibita à variis Auctoribus non ſolum deſcribitur, verum etiam delineatur & nominibus donatur variis, ceu eadem collecta leguntur in Flora Malabarica, inter ſpecies Alceæ. *Præ omnibus illis vero aptiſſima mihi videtur plantæ denominatio à Cl. Tournefortio propoſita, quando ab eodem vocatur* Ketmia Ægyptiaca, ſemine Moſchato.



P Sluyter Sculp.

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Explanation of Plate 42d

This is the Musk Flower, call'd by ye Dutch Muscus Bloem, the Plant grows to Eight Feet in Hight, and bears yellow Flowers without Scent, after they fall off, it produces a Large Head full of brown Seeds, which give a strong Musky Odour, the Indian Virgins string them & make Bracelets thereof for their Arms, wch they esteem a great Ornament, with the Leaves they fatten the Indian Chickens; This green Caterpillar striated with Black (which is drawn on ye Bud at ye Top of the Plant) I found Eating ye Leaves, On ye 20th March it changed into a Scarlet Chrysalis, which is drawn Just by ye Worm, & on April 2d produced a White Moth which is drawn Which is drawn at ye Top of ye ~~[illegible]~~ Plate.
In July following I found another Caterpillar on this Plant, which I have also seen on ye Guajava in Page 19th, they were black, striped with yellow, & their Head & Tail was Red. On the 10th July they spun up in thin Bags, & changed into small Chrysalis's, One of which (on ye 26th Day) produced a small Moth flying by Day; it was Elegantly striped with sky colour, & is drawn at ye bottom of ye Picture.

Annotations

By the many Authors that have describ'd & drawn this Plant, it has divers names given it, all which are collected in my Flora Mal.a amongst ye Altea, tho the name of Ketmia Ægyptiaca semine Moschato, seems to me the most proper of them all.

Explanation of Plate 43d

Here is represented a Bough of a most Excellent Tree, which grows in ye Woods, ye Leaves of which are tough & hard; out of ye stem of ye Tree grow certain Excresencies like little Horns, standing in Circles round ye Stem, which are Medicinal for Diseases of ye Lungs, This Tree is call'd by ye Dutch Marmelade Doosies Boom, from ye Fruit, which on ye outside is ightfull & Hairy, at first green but afterwards of a yellow Wood colour, but ye inside is taken out and Eaten, & is like ye European Medlar, in Taste colour and Seed, the outside (when ye middle is taken out) resembles a Box, & is therefore call'd by ye Dutch, Marmelade doos, or ye Box of Marmelade, I found on this Tree, which was cover'd all over with Sharp Bristles, at the end of each of the two foremost of which hung another which was Star Fashion'd, it was all over black & devour'd vast numbers of these hard Leaves, On ye 3d of April, it stuck to ye Tree, & changed into a Chrysalis, which on ye 18th produced a beautifull Butterfly, call'd in Holland by ye French name, Page de la Reine.

Annotations

This Tree agrees very much with ye Panitsjeka Maram, in Hort: Mal: & ye Janipaba of Piso, its many other names are collected in my Flora Malab: where it is call'd Pomifera India Tinctoria &c.a the only difference is in ye Flower Cup which in Hort: Mal: is made to contain ye Fruit.



P. Sluyter Sculp.

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EXPLICATIO FIGUR. XLIII.

HIc ramus eſt arboris ſylveſtris excelſiſſimæ, foliis duris & rigidioribus, in cujus pediculis ligneis asperæ quædam enascuntur excrescentiæ, rotundis veluti corniculis inſtructæ, quibus in Medicina ad pulmonum morbos utuntur. Dicitur hæc arbor Belgis *Marmelade-Doosjes-Boom*, à fructu in eâdem crescente, qui extus horridus & piloſus, primum viridescit, dein lignea flavedine tinctus indurescit. Iſtius per medium diſſecti interanea comeduntur, cum Mespilis Europæis ſapore, colore & ſeminibus plurimum convenientia; cortex refert pyxidem, quamobrem & *Marmelade-doos* Belgice, hoc eſt pyxis Marmelatæ, nuncupatur.

Erucam in hac arbore reperi, corpore hirſutis aculeis armatam, quorum extremitatibus appendicula quædam forma ſtellæ adhærebat: tota nigra erat, duriora vero hæc folia ipſi pabulum largiebantur. Die 3. Aprilis in aureliam transfigurata eſt, poſtquam ligno arboris ſe agglutinasſet: hinc die 18. ejusdem menſis venuſta erupit papilio, quam Gallico nomine in Belgio *Page de la Reine* appellare ſueverunt.

Multum congruit hæc arbor cum iſta, quæ dicitur in Horto Malabar. Panitsjika-Maram, *& à Piſone* Janipaba; *cujus plura cognomina alia recenſentur in Flora Malabarica, ubi vocata eſt* Pomifera Indica Tinctoria, Janipaba dicta, *Raji Hiſtor. Plant. Differentia ſolum quædam in calice floris ſubeſſe videtur, qui in Horto Malabar. fructui præbet fulcimentum.*

EXPLICATIO FIGUR. XLIV.

R*Ocu* procera arbor eſt, florem dilute rubentem, inſtar mali in Europa, producens; quo deciduo, ſequitur capſula ſeminalis, ex oblongo rotunda, & caſtaneæ in modum echinata. Hac ipſa pulchre rubentia continentur ſemina, quæ in aqua ad macerandum reponunt Indi, atque ſic rubicunda ſecedit tinctura & ad fundum præcipitatur: tum ſenſim decantata aqua, colorem è fundo collectum ſiccant, quicum varias ſibi ipſis in nuda cute pingunt figuras, ita ſe multum ornari, exiſtimantes.

Virenti paſcitur fronde cauli inferius irrepens eruca, punicea, flaveſcentibus ſtriis inſignita, & pilis rubentibus onuſta. Die 4. Aprilis in duriuſculam & hirſutam aureliam, hinc die 6. Maji in phalænam obſcure virentem tranſiit.

Præterea in hac arbore reperi fuſcam ejuſmodi erucam, ceu ſuperius folio impoſui, quæ eadem veſcebatur fronde. Die 26. Martii telæ incluſa in aureliam abiit, qualis interjacet foliis, & die Aprilis 10. in cineream mutata eſt phalænam, veluti ad figuræ ſummum in planta hærentem expreſſi.

Hæc arbor eſt Urucu *à Piſone deſcripta, & in Part. I. Horti Amſtelodam.* Orleane vel Orellana, folliculis Lappaceis, Hermanni, *nuncupatur, ubi adhuc aliæ denominationes in illius deſcriptione recenſentur. Cl. Tournefortius hanc arborem cum duabus* Cortuſæ Americanæ *ſpeciebus junxit, novumque inde genus conſtituit, quod ab illo dicitur* Mitella; *quoniam fructus iſtius pariter, ac in binis* Cortuſæ Americanæ *ſpeciebus, dehiſcunt, quando ſunt maturi, mitellam ſeu mitram Epiſcopalem formæ ſimilitudine referentes. Hæc itaque in Inſtitut. Rei Herb. ab eodem vocatur* Mitella Americana, maxima, tinctoria.



P Sluyter Sculp.

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Explanation of Plate 44th

The Rocu is a High Tree bearing Flowers of a pale Red colour, like yͤ Apple Blossoms in Europe, which falling off a Head of Seed follows of an oblong round and Prickly, like a Chesnut, This contains that beautifull red Seed, which yͤ Indians break or Macerate, & putting it into Water it gives it a Red Tincture, & sinks to yͤ bottom; after which they pour yͤ Water off very Leisurely & keep yͤ colour at yͤ bottom dry, with which they paint their Naked Bodies with various figures esteeming it a very great Ornament unto them; —

The Caterpillar Creeping on yͤ bottom of yͤ Stem, feeds on yͤ green Leaves, it was Scarlet, Striated with yellow, & Fortified with red Hairs, On yͤ 4th of April it changed into a Chrysalis, which was likewise Hairy & very hard, & on yͤ 6th of May produced a small green Moth;

I also found here a brown Caterpillar which ate yͤ green Boughs, & is drawn on one of yͤ upper Leaves, March yͤ 26th it changed into a Chrysalis; having spun up in a Bag which is placed among yͤ Leaves, & on yͤ 10th of April produced a grey Moth which is drawn at yͤ Top of the Plant.

Annotations

This Tree is yͤ Urucu of Piso, & in pt 1st of Hort: Amst: is call'd Orleane vel Orleana &c., where its other names are collected, The Excellent Tournefort has Join'd it with yͤ 2 Species of Cortusa Americana & calls it Mitella, for the Fruit of this (as well as yͤ Cortusa Amer:) bursts open & represents yͤ shape of an Episcopal Mitre, & therefore he intitles it in his Inst: rei Herb: yͤ Mitella americana maxima tinctoria. —

Explanation of Plate 45th

This Fl:s Pavonis is a Plant, growing to nine Feet in Hight which bears Red, & yellow Flowers, the Seed of it if given to women in Labour, it forwardeth their delivery, tis for this reason that those Indians which are most hardly Used in their Servitude, by ye Dutch, procure to themselves abortion by this Plant, for their Children are born in Bonds & must Undergo ye same yoke with themselves. and those Negro Servants which are brought to Surinam from Guinea & Angola, will neither Conceive nor bring forth Children, tho never so will Used, but will sometimes Kill themselves to get free from ye Slavery which they all undergo for they believe they shall then return with Liberty to their own Country & Friends as they themselves inform'd me,

The Caterpillars which Lived on this Plant were sky colour'd, & fed on ye green Boughs, Jan.y 22. 1700, it became without motion; & chang'd into a Scarlet Chrysalis which on ye 16th Feb.y produced a grey Moth, which I have drawn Flying at ye Top of ye Plant, with its Proboscis, Sucking ye Honey from the Flowers.

Annotations

This is ye Tsjetti mandani in part 6th of Hort: Mal: The divers names which other Authors have given it are collected in the Flora Mal: under the Title of Christa Pavonis Coronilla &c Tournefort writes that he could never find any name to it, & therefore he himself gives it one and intitles it Poinciana flore pulcherrimo.



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EXPLICATIO FIGUR. XLV.

HIc *Flos Pavonis*, planta novem pedum altitudine creſcens, flores producit flavos & rubicundos. Semen mulieribus exhibetur parturientibus, ad promovendos partus labores: hinc fit, ut Indæ apud Belgas in ſervitute ſua durius tractatæ, ejus ope ſibi abortum accerſant, liberos tam gravi jugo ſibi ſimiles & pariter mancipia naſci, præpeditur æ. Servæ etiam Nigritæ, Surinamum è Guineâ vel Angolâ delatæ, ni benigne admodum excipiantur, neque procreant, neque expetunt infantes: quin mortem interdum ſibi ipſis conſciſcunt, ob acerbitatem jugi, quo communiter premuntur; in patria enim ſe ab amicis cum libertate regeneratum iri, arbitrantur; veluti hoc ipſæ mihi enarrarunt.

Erucæ in hac planta vivunt, cæſio colore tinctæ, quæ virenti ejus fronde nutriuntur. Anno 1700. die 22. Januarii quietæ jacentes, mutata forma aureliæ factæ ſunt coloris punicei; unde Februarii die 16. cineritiæ phalænæ prodierunt, proboſcide ſua mel è floribus ſugentes, qualem ſuperius volantem delineavi.

Hæc arbor in Part. VI. Horti Malabar. depicta cernitur, & nomine Tsjetti-Mandaru *deſcripta eſt. Diverſis quoque aliis denominationibus apud alios eadem proponitur, quæ omnes in Flora Malabarica mea recenſentur congregatæ ſub titulo,* Criſta Pavonis, coronillæ folio, prima *&c. Cum autem, hanc plantam generum hucusque cognitorum nulli poſſe accenſeri, Cl. Tournefortius obſervaſſet, ex ea novum condidit, &* Poincianam flore pulcherrimo *illam nuncupavit.*

EXPLICATIO FIGUR. XLVI.

SUaveolentia *Jaſmina* Surinami ſponte, neque minus denſe, quam vepreta in Europa, paſſim creſcunt, adeo fortem ſpirantia odorem, ut è longinquo ſuavitate ſua nares feriant.

Sub his Jaſminorum virgultis plerumque magna copia deliteſcunt Lacertæ, Iguanæ, Marcgravio ſic dictæ, Belgis *Leguanen*, Serpentes: quamobrem hic pulchrum & rarum appoſui Serpentem, ſub illis ad radices plantæ à me captum, qui morem prorſus habet ſingularem ita in orbem ſeſe contortiplicandi, ut caput inter gyros ſuos penitus recondat.

Fronde Jaſminorum veſcebatur viridis hæc eruca, quæ & plantarum Tab. XIII. & XIV. exhibitarum folia depaſcebat. Die Februarii 12. in pulchre ſtriatam fuſci ac nigri coloris aureliam transfigurata eſt, quæ tacta diu ſeſe circumvolvebat: hinc die 16. Martii phalæna cinerea producebatur, interioribus alis flaveſcens.

Hæc planta eſt Pitsjegam-Mulla *in Part VI. Horti Malabar. deſcripta; cujus nomina alia conjuncta reperiuntur in Flora Malabarica poſt titulum,* Jaſminum humilius magno flore, *B. Pin.*



Explanation of Plate 46th.

The sweet Indian Jasmine grows every where naturally at Surinam & is as thick as y^e Briars of Europe, It has a very Strong Odour, & casts y^e Scent a great way off; Under this Jasmine lie great numbers of Lizards (call'd by Marcgrave Iguance, & by ye Dutch Leguanen) & Serpents, I have therefore here drawn this rare & Beautifull Serpent which I took from ye Root of this Plant, & being Dead was after this singular manner Wreath'd up, ye Head coming between ye Rings of ye Body; This green Caterpillar, feeds on ye Leaves of this Plant; likewise of those describ'd in Page 13th. & 14th. On the 12th of April it changed into a black Chrysalis, Beautifully Striated with brown, which being touch'd in ye Daytime closes itself up, & on ye 16th March produced a grey Moth, ye Inside of ye Wings being Yellow.

Annotations

This is ye Pitsjegam Mulla describ'd in p^t 6th of Hort: Mal: which with its other Names may be found in Flora Mal^a under ye Title of Jasminum humilius magno flore B: Pin: .

Explanation of Plate 47th

What was said in Page 34th of ye blue Grapes, may here be applied to the white, which Increase & Flourish as much as the other; In the Month of May 1700, I found green Caterpillars on this Vine, which were very voracious, & are represented on one of ye upper Vine Leaves, On ye 15th of May they became fix'd, & their colour changed much nearer to brown, & after 3 Days they became Chrysalis's, from one of which on ye 3d of June came the Beautifull Moth, which is drawn at ye top part of ye Picture, & was green & Red, Striated with a faint scarlet, and the Horns & Proboscis of a Golden yellow, The Male of which was abundantly more Beautifull than the Female.

The lower Caterpillar likewise feeds on ye Vine Leaves, when it is stretch'd out at its Natural length, it is as long as ye other, but when it is touch'd it contracts itself up (as it is here drawn on ye Stem) & Emits a spume from its Mouth; about ye middle of May 1700 it chang'd into a brown Chrysalis (having cast ye Skin) & is drawn on ye Stem; On ye 6th of June it produced this beautifull Moth, spotted with brown & striated with white, the Feet being as white as Snow, I have drawn both these Insects with their changes in one Picture, because they both Eat the same Food.


J: Mulder Sculp

EXPLICATIO FIGUR. XLVII.

QUod ipſum pag. 34. de *Uvis cæruleis* attuli, idem hic de albicantibus poſſet dici, quæ non minus ac illæ in terra Surinamenſi augentur & luxuriant.

Anni 1700. menſe Majo in pampinis hujus vitis prægrandes obſervavi viridescentes erucas, admodum voraces, qualem ſuperius in palmite delineatam cernis. Hæc die Maji 15. quieta hærens colore mutato ad fuſcum magis accedebat, & tres dies poſt in aureliam transibat; unde Junii die 3. venuſta erupit phalæna, viridis ac rubicunda, cum ſtriis pallide ſpadiceis, proboscide & corniculis aurea flavedine tinctis, uti in volante ſuperius expreſſi. Mas tamen hujus phalænæ pulchrior longe erat, ac fœmina.

Inferior eruca ſimiliter folia vitiginea depascebat. Exporrecta ſuperiori longitudine non cedebat; tacta vero in arctum ſeſe contrahebat, velut in cauliculo hærens infra cernitur, ſpumam ex ore emittens. Circa medium Maji menſis an. 1700. depoſitis exuviis, in fuscam aureliam, qualis adjacet cauli, transfigurata eſt, & die 6. Junii in elegantem hujusmodi phalænam, è fusco maculatam & ex albo ſtriatam, pedibus niveis, & proboscide auri in modum flavescente. Utramque metamorphoſin unica in Tabula repræſentavi, cum ambobus inſectis una eademque eſſet esca.

EXPLICATIO FIGUR. XLVIII.

T*eAbrouba*, virens fructus, ab Indis ſic dictus, in procera naſcitur arbore ſylveſtri, quæ flores exiguos profert ex albo viridescentes, ſimiis cibum præbentes. Floribus deciduis, rotundum apparet dehiſcensque capitulum, unde ſenſim producitur fructus, ſemine, ut Ficus, interius ſcatens plurimo, ſed albicante. Hinc ſuccum exprimunt Indi, quem Solis exponunt radiis; ſic ille tandem nigreſcit, ipſisque colorem exhibet, quo nudo in corpore varias ſibi pingunt figuras, per novem dierum ſpatium nullo ſapone delendas; poſt illos vero elapſos haud diutius durat ornatus. Fructus venenoſus ab iis creditur. Lignum arboris inciſum lacteum fundit liquorem, quo ad caput ſibi inungendum utuntur Indi, ſi nimis illud pruriat. Quoniam enim nudo incedunt capite, in illud ex animalculis quibusdam alatis emiſſum ſemen facile decidit, & vermiculos ibi generat, maximum pruritum excitantes, quos ope ſucci iſtius necant & pellunt.

Eruca fructui irrepens, foliis hujus arboris nutritur; ex atro flaveſcit, ſetis fere ſimilis peniculo, quo veſtes tergere ſolemus. Auguſti circiter die 3. telam lignei coloris contexuit, cui incluſa etiam transformata eſt, ape magna, nigra & flavis annulis cincta die 15. Auguſti inde prorumpente.

Prægrandem in ſummitate iconis appoſui volantem Scarabæum, ut magis illam replerem.

Vermis ſubalbidus in figuræ medio virenti folio irrepit, *Palmyt Worm* Belgice vocatus, quod in Palma arbore ſuum quærat pabulum. Hic illum appoſui, quia Palmam ob foliorum profunde ſectorum amplitudinem nimiam non potui delineatam exhibere. Naſcitur aliàs hæc Palma caudice brevi & raro, quem cingunt folia, unum ſupra aliud ex illo usque ad apicem emergentia, in altum ſurrecta. Quinquaginta annos creſcere arborem, antequam omnino ſit perfecta, incolæ perhibent: tum vero illam cædunt, ubi foliorum exortus eſt. Truncum etiam viri longitudine, quousque ſcilicet mollis ſeu rarus eſt, amputare, & Braſſicæ floridæ in modum decoquere aſſolent; gratiore enim gaudent ſapore, quam thalami Cinaræ. Procreantur in trunco hujus arboris copia innumera vermiculi, qui medulla ejusdem paſcuntur, acaris caſeorum initio haud majores, tandem vero in molem auctæ, qualem hic expreſſi. Vermes iſtos prunis imponunt candentibus, aſſatosque cibum credunt eſſe delicatiſſimum. Producitur à vermibus his Scarabæus ejusmodi nigricans, uti hic depictum exhibui, quem Indi nuncupant Parentem vermium in Palma arbore viventium, Belgæ *Moeder der Palmyt-Wormen.*



J. Mulder Sculp

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Explanation of Plate 48th

The Tabrouba is a green Fruit, which is so call'd by ye Indians, ye Tree grows to a great Hight, & bears small green & white Flowers, which ye Apes delight to feed on, These falling off, a round Head appears, which bursts open & by degrees produces the Fruit, which is full of Seeds like those of a Fig, but white, The Indians preſs the Juice out, & setting it in ye Sun, it changes it to a black colour, with which they Paint their Bodies with various Figures, which in ye space of one Day cannot be wash'd off with any Soap, & in a little time more becomes intirely fix'd, & is an Ornament to them all their Lives after, they believe ye Fruit to be poisonous. The Stem of ye Tree being cut, emits a Milky Liquor, with which the Indians anoint their Heads, when they are Scabby, for by reason of their going always bare Headed, it gives a good Opportunity to vast numbers of Winged Animals to lay their Seed there, so that it breeds Vermin, & causes an exceeding great Itching, which this Juice allays & carries off; The Caterpillar which Creeps upon the Fruit, feeds on ye Leaves of this Tree; it was yellow & black, with Tufts of Hair, like ye Brushes with which they Brush Cloaths, It spun up in a Bag of a Wood colour, about ye 3d Augt & on ye 15th produced a large Wasp which was black Circled round with yellow, I have drawn it here because ye Palm Tree is to large to be drawn in its Natural bigneſs on one of these Leaves, This palm at ye begining of its growth has a short & slender Stem, which is surrounded with Leaves which shoot out one above another to ye very top of ye stem, & grows to a great Hight, the Inhabitants relate that this Tree is Fifty years before it comes to its full bigneſs, The time for Felling it, is when ye Leaves are put out; they cut it down when it is about ye Hight of a Man, & ye Stem is slender & soft, & Boil it they do green Coleworts, & it has a much better Taste, that Artichoke Leaves, In the Trunk of this Tree breed innumerable quantities of Insects, which Eat ye Pith & at first are no bigger than mites in a Cheese, but grow to ye bigneſs of that which is here drawn, These Insects they broil on the Coals & Eat, esteeming them very delicate Meat, from these Worms are produced black Beetles which I have drawn on ye Picture, and which ye Indians term the Parent of ye Worm which lives on ye Palm, & ye Dutch Moeder der Palmyt Wormen.

Explanation of Plate 49th

The Pomegranate which is a Tree sufficiently known all over the world, grows in ye Fields at Surinam, I observed on it a kind of Beetle which was naturally very Slow & Sluggish, & consequently easy to be taken; under ye Fore part of their Head, they have an oblong Proboscis, which they stick into Flowers when they suck out ye Honey, On ye 20th Day it remain'd without motion, & ye Skin on their Back breaking of its own Accord, produced green Flies with transparent Wings, they are very common at Surinam, & Fly with Extraordinary swiftness, that it took me up several Hours to Catch one of them, This Fly makes a Sound like a Lute, & may be heard a great way off by its Singing, for which ye Dutch call it Lierman or ye Harper, It has ye same Proboscis as ye Beetle had, & when ye Feet Eyes & Body comes thro the Back, ye cast Skin retains ye Form of ye first Insect; The Indians first inform'd me that these Animals produce ye Flies which ye Dutch call Lantarendragers (ie) Lanthorn bearers, which are of such Form as I have here drawn ye Male and Female both Flying & resting; their Heads or Hood in ye place of Head, shines in ye Night like a Lanthorn, & in ye Day is transparent like Bladders, & is striated with Red; This Bladder gives so great a light in ye Dark, that one may see to write by it, & there were lately some in Holland, which gave a light sufficient to Read by; having therefore kept this Fly, I observ'd its first Metamorphosis, in which it retain'd ye Form of a Fly in every part (not changing ye Wings) only a Bladder grew out at ye Head, The Indians call this ye Mother of ye Lanthorn Bearer, as ye Beetle is call'd ye Parent of ye Fly; The Fly which is drawn on ye Pomegranate Blossom at ye bottom of ye Picture, shews how the Harper is by degrees chang'd into ye Lanthorn Bearer, they are so call'd ye better to distinguish them for ye latter as well as ye former make a Sound like a Harp, which perhaps is thro their Proboscis, which is common to them all, & remains ye same in all their changes, When the Indians had brought me a great many of these Lanthorn Bearers I shut them up in a large Box not knowing that they shone by Night, but in ye Night hearing an unusual Buzzing which awaken'd & terrified me I Jumpt out of Bed, & caus'd a light to be struck, Wondring what Strange Humming was in ye House, when we perceived that the Noise came from that Box, we therefore pull'd off ye Lid in a great Fright, but flung it down upon ye Ground in a much greater fright than before, when we saw as it were a flame of Fire come out, which shone again, every time one of ye Insects flew out, but having consider'd & view'd them & they returning to us we gather'd them together again greatly admiring at their Splendors.

Annotations

In plate ye 9th is drawn a Bough of ye Pomegranate with single, & here with double Flowers; both which species are sufficiently known & cultivated in Europe.



J. Mulder Sculp.

EXPLICATIO FIGUR. XLIX.

M*Alus Punica*, arbor ubique terrarum ſatis nota, etiam in agris Surinamenſibus naſcitur. Exhibuit illa mihi aliquod ſcarabæorum genus, tardum natura & ſegne, atque adeo captu facile, anterius ſub capite oblongam gerens proboſcidem, quam, ut mel per eandem exſugant, floribus ſcitè infigunt. Die 20. immotè illis quieſcentibus, ex ſponte rupta in dorſo pelle muſcæ virides eruperunt, alis inſtructæ pellucidis, quales Surinami frequentiſſimæ reperiuntur, volando celerrimæ, ita ut aliquot uni ſolùm capiendæ horas inſumerem. Lyræ ſonum edit muſca ejusmodi, eminus cantu percipienda, qua de re Lyricen etiam, Belgis *Lierman*, nuncupari ſuevit. Eandem vero, quam præcedens habuerat ſcarabæus, ſervaverat proboſcidem, cum per dorſum pedes, oculi, totumque corpus exiviſſet, relictis exuviis, ſitu & forma priſtinum inſectum mentientibus. Perſuaſum mihi ab Indis eſt, ex hoc muſcæ genere ita dictos Laternarios, Belgis *Lantarendragers*, produci, formatos, ut hic in mare & fœmina tam volitante, quam quieſcente delineavi. Caput eorum ſeu cucullus in capite noctu laternæ in modum lucet; de die autem plane eſt tranſparens inſtar veſicæ, atque ſtriis è rubicundo viridique colore diſtinguitur. Qualis eſt lucernæ tenebras illuminantis lux, talis nocturno tempore ex hac veſica emittebatur fulgor, ſic prorſus, ut ſcripta expreſſa typis, ac ſunt novellarum in Belgio, ad lumen ejus legere haud foret impoſſibile. Adhuc apud me iſtiusmodi conſervo muſcam, ſuæ metamorphoſi proximam, quæ omni ex parte, ipſis quoque non mutatis alis, muſcæ retinuit formam, niſi quod in capite accreverit veſica. Dicitur hæc muſca ab Indis mater Laternariorum, perinde ut ſcarabæum prædictum muſcæ nuncupant parentem. Quam inferius in flore mali Punicæ cernis hærere muſcam, quomodo ſenſim Lyricen in Laternarium transfiguretur, exhibet. Ut melius diſtingui poſſint, ita vocantur; quamvis poſterior æque ac prior Lyræ ſonum edat, forſan proboſcide mediante, quippe cum hæc communis omnibus ſit & in cunctis transformationibus maneat eadem. Cum aliquando Laternarios magna copia mihi attuliſſent Indi, ſcatulæ eosdem majori ligneæ incluſi, illos noctu lucere, adhuc inſcia; verum de nocte inſolito ſtrepitu expergefacta & perterrita, è lecto proſiliens lumen accendere juſſi, quis domi meæ inſuetus eſſet ſtrepitus, ignara. Tum vero, è ſcatula ſtridorem profectum, illico nobis patuit; illam itaque cum animi quadam perturbatione aperuimus, ſed adapertam magis adhuc paventes in terram ſubito rurſus dejecimus, quod inter aperiendum inde velut ignea erumperet flamma, toties refulgens, quoties novum evolaret inſectum: quo tandem animadverſo, ad nos redeuntes, iterum congregavimus animalcula, ſplendorem in ipſis plurimum demiratæ.

Figura IX. ramus ex Malo Punica, *ſeu* Granata, flore ſimplici, *hic* flore duplici *delineata conſpicitur: utraque arbor ſatis apud nos cognita eſt, atque in hortis colitur.*

EXPLICATIO FIGUR. L.

B*Attattes* albicantes, fructus ſunt terreſtres ſponte provenientes, quibus tamen homines non veſcuntur. Florem producunt album elegantem, veluti cernitur in hac figura.

Plures ex iſto erucarum genere, quod in radice repit, apud me collectas ſervavi, ſed corraſis perforatisque ſcatulis, è carceribus eruperunt; libertatem fuga quærentes. Die autem 4. Aprilis in horto meo cavitatem quandam in terra fodiendo detexi, quæ nonnullos ejusmodi vermes continebat, radici *Battattes* adjacentes, & in arctum convolutos: ex his una formam aurei iſtius & pulchri ſcarabæi jam tum penitus induerat, aliæ ad eandem minus accedebant, omnes adhuc molles plane atque albicantes erant, ſed aliquot horis poſt obdurescentes, tam venuſto & aurea viriditate ſplendente colore pedetentim tingebantur.

Die 6. Junii aliud in his radicibus reperi genus vermium, figuræ, qualis in caule repens conſpicitur, pariter tamen in anguſtum ſeſe contrahens, veluti ad apicem plantæ expreſſi. Initio molles & albi, ſi paucas per horas aëri expoſiti linquerentur, cum duritie nigrorem acquirebant, ſenſim permutati in ſcarabæos ejusmodi, qualem ſupra volantem delineavi.

Alia quædam Battattes *Icone XLI. exhibita & deſcripta eſt, quam tum merito à variis Auctoribus ad* Convolvuli *genus referri, in eâdem pagina ſubjunxi. Quæ vero hic depingitur ſpecies, inter* Convolvulos *nequit locari, cum florem habeat in multas partes ſectum, & præterea infundibuliformem; flos* Convolvuli *contra ſit campaniformis, margine plerumque extrorſum reflexo. Debet itaque* Battattes *hic propoſita potius ad genus reduci, quod vocaverunt* Quamoclit, *& meo judicio nuncupari,* Quamoclit Americana radice tuberoſa, flore albo, pulcherrimo.



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Explanation of Plate 50th.

The white Potato's are a Fruit which grow wild upon ye Ground, but are not eaten by Men. I had taken a great many of ye Caterpillars which Creep upon ye Root, but by Scraping & Eating ye Box into which I had put them, they escaped out of their Prison, seeking Liberty by Flight, On ye 4th April I found a Hole in ye Ground in my Garden in which were some of these Worms, roll'd up in a Lump, near ye Potato Roots, One of these thus rol'd up, chang'd into a Beautifull Beetle, ye others changed into ye same sort but smaller, all of them being at first white & soft, but in an Hours time growing hard, their green & Gold colour coming on by degrees, & was very resplendent & beautifull, The 6th of June I found (on ye Root of this Plant) the worm which creeps on ye Stem, & also rolls itself up, as it is drawn at ye Top of the Picture, It was soft and white, but in a few Hours after being exposed to ye Air, became hard and Black, & by Degrees was changed into ye Beetle Flying at ye Top of ye Picture.

Annotations

In Page 41st I have shewn how Justly ye other Potatoes are by many Authors made a Species of Convolvulus, which this cannot be, because ye Flower is divided into many & shaped Funnel wise, whereas that of ye Convolvulus is shaped like a Bell, with ye Edge turn'd much outwards, I have therefore reduced it to a Species of ye Quamoclit, & in my Judgement it ought to be call'd Quamoclit Americana, radice tuberosa, Flore albo pulcherrimo.

Explanation of Plate 51.st

Here is drawn a Bough of a High Tree, which grows in y.e Woods, & bears oblong & tender Flowers with Chives, The Heads of Seed are Long & Wreath'd Pods, containing black Beans, which are surrounded with a white Viscous substance, which for its gratefull sweetneſs they suck off; by reason of the sweetneſs of y.e Seed the Dutch call it Zoete-boontjes, & y.e Beans themselves (of the Virtues of which y.e Dutch are Ignorant) are call'd by y.e Indians Wyche Boekjes; On y.e Bough of this Tree feed these Caterpillars of a greenish yellow, with black Feet, & Arm'd on y.e Back with black Prickles, I took above an Hundred of them, but they all Died, because y.e Leaves of this Tree being gather'd become immediately Dry & hard, that y.e Caterpillars cannot Eat them, neverthele ſs on y.e 20.th June 1700, one of them chang'd into a Chrysalis which is placed at y.e end of y.e Pod, & at y.e end of y.e Month produced a beautifull Butterfly, which is drawn both Flying & resting.

Annotations

This Tree is not as I know of described any where else; nor can it Justly be claſs'd with any other, among so vast a number.



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EXPLICATIO FIGUR. LI.

HIc ramus eſt proceræ arboris ſylveſtris, cujus flores tenuia & oblonga continent ſtamina, capſulæ ſeminales longiores ſunt & contortæ ſiliquæ, repletæ intus fabis nigris, alba circumdatis viscoſitate, quæ ob gratam dulcedinem exſugi ſolet. Propter eandem quoque fabæ dulces, Belgis *Zoete-boontjes* nuncupatur, tametſi fabarum uſus ſit ignotus, quas Indi vocant *Wycke-Bockjes*..

Paſcuntur fronde arboris virenti flavescentes hæ erucæ, pedibus nigræ, & aculeis in dorſo nigricantibus armatæ. Plures quam centum collegeram, ſed omnes perierunt; quod folia ex arbore decerpta ſtatim ſiccentur & ſic indurescant, ut erucis escam dare nequeant. Unica tamen die 16. Junii 1700. transmutata eſt in aureliam, qualis in extremitate ſiliquæ jacet, ex qua ſub finem menſis ejusdem elegans papilio productus eſt, cujusmodi volantem & quiescentem hic exhibuimus.

Hæc arbor nusquam, me conſcio, deſcripta reperitur, neque etiam ad genus aliquod plantæ notum, in tanto eorundem numero, commode referri poteſt.

EXPLICATIO FIGUR. LII.

M*Alus Aurantia*, Sinenſis noſtratibus dicta, Surinami creſcit altiſſima, ut excelſiſſimam in Europa malum altitudine ſua poſſit æquare. Folia virentia ſplendent, flores albicantes & fragrantiſſimi, fructus aurantio flavo tinctus ſapore præditus eſt gratiſſimo.

Erucæ, quas hujus arboris folia depaſcere obſervavi, viridescunt & flava per totum corpus inſigniuntur ſtria, quolibet ſegmentorum quatuor rotundis veluti coralliis aurantiis diſtincto, quæ pilis exiguis circumſepta ſunt. Die Februarii 18. telæ ſeſe intexuerunt colore ochræ, veluti caulibus infra cernitur interjacens; unde Martii die 11. tam venuſtæ prodierunt phalænæ, ſingulis alis macula vitro, quod Moscoviticum dicitur, non abſimili notatæ, volatu celeres; quæ tribus diebus poſt decem poſuerunt ovula albicantia. Copioſæ iſthuc loci reperiuntur prædictæ erucæ, ad extremum adeo pingues & craſſæ, ut plane fiant rotundæ, ter in anno hanc arborem obſidentes. Telam ducunt fortem, quare bonum fore ſericum rata, iſtius aliquam collegi copiam & in Belgium transmiſi, ubi eadem optima judicata eſt: ut itaque, ſi quis erucas iſtas congregandi laborem non detrectaverit, & bonæ notæ bombycem, & maximum hinc lucrum ſibi comparare poſſet.

Hæc arbor eſt Aurantium Olyſſipponenſe, *Ferra* | *rii, &* Malus Arantia Luſitanica, *Horti Reg. Pariſ.*


J. Mulder Sculp.
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Explanation of Plate 62

The Orange Tree call'd by us Sinensis, grow to so very high a Tree at Surinam that it rivals the Tallest European Apple Trees, It has Shining green Leaves, & white and exceeding sweet Flowers, the Fruit of a Yellow Orange, and full of a most gratefull and delightfull Juice — I found on this Tree, & fed on ye Leaves thereof, green Caterpillars, Striated all over the Body with Yellow, & having between each Joint four round Spots like Coral, with small Hairs growing round them, On ye 18th Feby it spun a Bag of an Ocher colour, which I have drawn on ye lower part of ye Stem, & on ye 11th March produced this most Elegant Moth, having on each Wing, a spot like Icing Glaſs, it is like that call'd ye Muscovite, being very swift of Flight and mark'd much ye same, three Days after they came out, it Lays ten Eggs of a white colour, Vast numbers of the Caterpillers are found here & are thick long & round, & breed on this Tree three times a year, they spin a Strong Bag, which esteeming good silk, I got a great number of them, & sent them to Holland, where it was also Judged to be very good, and that if care was taken to collect them, they might make as much Profit by them, as they could by the well known Silk Worm.

Annotations

This is ye Aurantm Ollysiponense, of Farrar & ye Malus Aurantia Lucitanica in Hort: Reg: Par:.

Explanation of Plate 53.

Being a great while in a Desart & Uncultivated place, among others, I observ'd this Medlar Tree, it contains a Substance in y.e middle of the Fruit, in y.e Shape of a Heart, which they Eat for the Medlar, & close under which grow two thick Leaves of a Blood colour, which gives it a pleasant look. — This Caterpillar I found on this Tree, it was Striated all y.e length of y.e Body with Rose colour, y.e Head was brown, & between each Joint of y.e Body it had four black Thorns, having carried it Home it presently chang'd into a Chrysalis of a Light Wood colour, which is drawn on a Branch at y.e bottom of y.e Picture, & after fourteen Days, being about y.e end of Jan.ry 1700, produced this most Beautifull Butterfly, the colour of which was like burnish'd Silver, cover'd over with a gloom of Sky colour, green and Purple; & y.e whole so beautifull as can neither be describ'd with a Pen, nor imitated with a Pencil; — On y.e inside of Each Wing, was three round Spots of a yellow Orange colour, surrounded with a black Circle, & round that with a green one, the Edges of the Wings were of a Yellow Orange colour, Beautifully Striated with black & White.

Annotations

The Leaves of this Tree, are like those of y.e Mespilus Americani, alni vel corili folio fructu mucaginoso also, in p.t 1.st of Hortus Amst: but whether it is the same or no, I cannot determine, because there is in that Book but a short description of it.



P Sluyter sculp.

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EXPLICATIO FIGUR. LIII.

Cum aliquando in deſerta & inculta loca eſſem longius egreſſa, inter alias etiam reperi arborem altiſſimam, quæ *Mespilus* ab incolis vocatur. Fructus in medio ſui corpus quoddam albicans continet, forma cor referens, & nigris coopertum ſeminibus, quo veſcuntur homines pro meſpilo: proxime ſub illo bina craſſa cernuntur ſanguinei coloris folia, quæ adhuc quinque alia, itidem denſa, ſed colore ſubviridi tincta, ſequuntur, ſpectaculo ſatis jucundo.

Appoſita flaveſcens eruca hic à me reperta eſt; per totius corporis longitudinem ſtriis roſeis erat ornata, capite fuſca, quatuor nigris aculeis in unoquoque ſegmento armata, pedibus itidem roſeo colore picta. Domum translata brevi in aureliam lignei ſubalbidi coloris transfigurata eſt, veluti inferius ramulo arboris impoſita conſpicitur: quatuordecim dies poſt, circa finem menſis Januarii An. 1700. hinc elegantiſſimus iſte erupit papilio. Politum ille æmulatur argentum, cœruleo longe nitidiſſimo colore veſtitus, virideſcens, purpureus, imo totus quantus formoſiſſimus, ita ut neque calamus deſcribere, neque penicillus imitari valeat ejus venuſtatem; quamlibet alam tres orbiculi flavedine aurantia tincti adornant, quos cingunt nigricantes circuli, iterum virideſcenti ora circumdati: alarum extima colore aurantio flaveſcunt, nigris & albicantibus ſtriis pulchrè inſignita.

Folia hujus arboris non diſſimilia ſunt illis, quæ habet Mespilus Americana, alni vel coryli foliis, fructu mucaginoſo albo, *Part. I. Horti Amſtelod. deſcripta: an vero eadem ſit hæc, affirmare non auſim, quia ex deſcriptione nimis brevi id ipſum haud liquet.*

EXPLICATIO FIGUR. LIV.

HÆc Planta, ab Indis *Ballia* nuncupata, in dumetis ad ripas in locis paludoſis naſcitur, quatuor vel quinque pedum altitudine; foliis inſtructa eſt virentibus rigidioribus, ceu ſunt arundinis; florem producit denſum rubicundum, cujus capitula ſunt exiliora.

Eruca folio inferius adhærens, eodem paſcitur, flava & nigricans, & ſtriis quibusdam diſtincta. Die 14. Junii in aureliam hepatici coloris mutata, veluti depicta eidem folio injacet, hinc die 21. Junii in exiguam phalænam coloris cineritii & punctis nigricantibus conſperſam, qualem infra folio appoſui, transformata eſt.

Superior flaveſcens eruca, nigreſcentibus ſtriis & fuſco capite inſignis, ad diem 2. Aprilis foliis hisce nutrita, exuvias depoſuit, telamque contexuit, ut in ſecundo foliorum cernitur, unde pariter die 14. Aprilis parva erupit phalæna ochræ colore tincta, veluti ſuperius in planta delineavi.

Circa idem fere tempus, maſſam aliquam luti figura ovatam feneſtræ meæ adjacentem reperi, quam ſimulatque aperuiſſem, quatuor ſeparatas in illa cavitates & in his vermiculos albicantes detexi, cum ſuis exuviis adjacentibus, ſicut in binis infra folium exhibet. Die 3. Maji feræ iſtiusmodi apes ſeu veſpæ, qualem expreſſi volantem, inde ſunt productæ. Hoc inſectorum genus Surinami quotidiana mihi vexatio erat, quod rebus delineandis intentam, ante oculos obvolitando, & circa caput ſuſurrando, identidem turbarent. Proxime ad latus meum in ciſtella pictoria ex argilla, uti prædixi, nidum ſtruebant, tam exacte rotundum, ac ſi rota figulari verſatus eſſet, baſi innixum exiguæ, quam itidem operimento ex argilla cingebant, ut interiora ab omni tuerentur incommodo. Foramen inſuper orbiculare in nido reliquerant, ita non minus introitu, quam exitu patente, qua via indies ipſas exiles in domum ſuam transferre erucas obſervavi, pabulo tum ipſis, tum ſuis fœtibus ſeu vermiculis, procul dubio ceſſuras, perinde ac faciunt formicæ. Cum vero illud veſparum conſortium mihi tandem evaderet moleſtum, deſtructo earum domicilio omnes dispuli, atque ſic totum hoc artificium mihi fuit manifeſtum.

Hæc planta mihi videtur eſſe Lachryma Job Americana altiſſima, arundinis folio & facie, *Plumer.* *à Cl. Tournefortio in Inſtitut. Rei Herbar. propoſita.*


J. Mulder Sculp.

Explanation of Plate 54th

This Plant call'd by ye Indians Ballias grows to ye Hight of four or five Feet, & is found in ye Hedges near ye Banks of Watry places; the Leaves are thick & green, like those of a Reed, it produces thick Red Flowers & small Heads of Seed; The lower Caterpillar which was striated with yellow & black, & is drawn on the Leaf, feeds on them, on ye 14th June it chang'd into a Liver Chrysalis, drawn on ye same Leaf, which on ye 21st produced a small grey Moth spotted with black, which is drawn at ye bottom of ye Leaf; The upper yellow Caterpillar, striated with black & having a brown Head, fed on these Leaves till on ye 2d April, it cast its Skin & wove a Bag, which is placed on ye 2d leaf, from this April 14th came a small Oker colour'd Moth, which is drawn at ye Top of ye Picture. about ye same time I found a Lump of Clay of an Oval figure under my Window, & when I open'd it, it was divided into four Cells, or Cavities, in which were these white Worms, with their cast Skins, two of which are drawn at ye bottom of ye Leaf, On ye 3d May they produced these furious Wasps, which I have drawn Flying, This Insect while I was intent upon drawing at Surinam, would Whisk Just before my Eyes, & Buz about my Ears in such a manner, that it was my Daily Torment and Vexation; then out of the white Clay which was in my Painting Box by my side, they would make them a Habitation so exactly round as if it had been turn'd by an Artist, & Standing on a small Basis, which it likewise Covers with Clay, that Nothing might molest it in the inside, at ye Top they leave a little hole, to paſs in & out at, & thro this Paſsage I have observ'd Caterpillars to go in, who without Doubt feed both on ye Worms & Wasps, as they do on ye Ants; When I was molested by any of these Wasps I always destroy'd their Houses, & by that means discover'd their Ingenuity.

Annotations

This Plant seems to me to be ye Lachryma Job &c, of Plumer, spoken of by Tournefort.

Explanation of Plate 55

The Indian Pepper grows to ye Hight of a middle sized Man, & bears white Flowers with Violet colour in ye Middle; the stem is green & hard & puts forth green & soft Leaves, the Fruit is at first green, but afterwards of a Beautifull Red; there are four species of this Fruit, here drawn, for ye Leaves & Flowers are ye same & only differ in bigneſs, It has a Sharp & biting taste, & therefore ye Indians rub it upon their Bread when they Eat it, or Season their Broth with it, & other uses, the Dutch Chop it among their Meat, & Fish and Eat it with them.

I found this beautifull & large Caterpillar on ye Pepper, it had all ye Length of the Body on each side, a Red Stripe, & down ye Back a white one, in ye hindermost Joint (which was parted from ye others by a Rose colour'd Stripe) it had a yellow Spot & a Horn of a Roſe colour, their Food is not only ye Leaves but even ye Pepper itself, On ye 22d Jan.y it chang'd into a brown Chryſalis, & from thence on ye 16th Feb.y came a grey Moth, having on each side of ye Body five Spots of a Golden yellow colour, flying only by Nights & resting by Day;

Annotations

This is ye Capsicum of Dodoneus & Tournefort, & ye Piper Indicum of Casp: and John Bauhin, who have describ'd but one of ye Species, tho there is a great many ye names of all which are reckon'd up by Tournefort, & many of them are drawn to ye Life in Hortus Eystettensis.



P. Sluyter Sculp.

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EXPLICATIO FIGUR. LV.

P*Iper Indicum* medii naſcitur viri altitudine, flores gerit albicantes, ſed in medio violaceos, caule ſurgit viridi & duro, folia profert mollia & graminei coloris, fructus initio virens, poſtmodum eleganter rubeſcit. Quatuor fructus hic appoſui ſpecies, quoniam flores & folia in omnibus eadem ſunt, præterquam quod magnitudine tantum differant, pro fructus diverſitate. Acris ille & urentis eſt ſaporis, quamobrem ab Indis pani comedendo affricatur, à Belgis vero conciſus cum carne & piscibus aſſumi, brodiis etiam nec non aceto indi ſolet, &c.

Exhibuit mihi Piper elegantem iſtam & prægrandem erucam. Utrumqne ejus latus ſtria rubicunda per corporis longitudinem, & integrum dorſum ſtria albicante in longum ducta conſpicuum erat: ſegmentorum poſtremum corniculo roſei coloris, quodlibet illorum autem macula flaveſcente cum limbo roſeo diſtinguebatur. Præbuerunt eſcam non ſolum folia, ſed ipſum quoque Piper, erucæ. Die 22. Januarii in fuſcam aureliam, atque hinc die 16. Februarii in phalænam ejusmodi coloris cinerei transfigurata eſt, quæ in utroque latere quinque maculas aurea flavedine inſignes oſtendebat, noctu ſolum circumvolans, de die vero quieſcens.

Hæc planta eſt Capſicum *Dodonæi & Tourneſortii*, & Piper Indicum *Caſp. & Joh. Bauhini, cujus diſcrimen in fructu unice conſiſtit. Magnus inde fit ſpecierum numerus, quem ſingulorum appoſito nomine in Inſtitutionibus Rei Herb. recenſet Tourneſortius, iſtarum plurimis etiam ad vivum delineatis in Horto Eyſtettenſi.*

EXPLICATIO FIGUR. LVI.

QUos hic exhibui flores, in ſtagnantibus reperi aquis: folia in illis non obſervavi, caulis ulnæ æquabat longitudinem, flores ipſi Croco flore violaceo ſimiles, ſinguli folium habebant cœruleum flava macula diſtinctum, quale eſt Iridis.

Animalcula in his aquis obſervavi, quæ Scorpiones aquatici ab incolis vocantur. Die 10. Maji An. 1701. quosdam ex illis collegi, unde menſis ejusdem die 12. hujusmodi animal productum eſt alatum, ceu ad ſummitatem plantæ volans delineavi.

Plures aquæ innatabant ranæ, binis auribus in capite inſtructæ, ac è viridi fuscoque colore undulatæ: ſinguli pedum digiti globulo in extremitate muniti erant, ſingulari naturæ artificio, ut ita ſuffultæ non ſolum natare ſed & ſuper aquas paludoſas & limoſas incedere poſſint. Sperma ſuum ad ripas aquarum exponunt, quod ipſum, ſi earundem cupis obſervare mutationem, colligendum & in fictili aqua repleto ſuper vivum cæſpitem in fundo reponendum eſt. Punctum nigricans eſt nullius formæ ſemen, quod albo glutine circumdatur, in illo vivit, ac ſenſim ſenſimque magis movetur; usque dum octiduo circiter poſt caudas naneiscantur, & in aqua natent tenellæ, ſed informes ranulæ, quales ſupra ad prædictam ranam quinque delineavi. Poſt aliquot dierum elapſum oculis, pauloque ſerius poſticis pedibus inſtructæ apparent, binis anterioribus iterum octiduo poſt è cute prorumpentibus; quo facto, cauda putrefacta decidit, & ſic quadrupedes & perfectæ jam ſunt ranæ, ex aquis in terras non raro emigrantes. Notandum vero, & aquam & cæſpitem eſſe identidem renovanda; animalcula vero, ſimulac moveri eadem animadvertimus, mica panis in aqua debere nutriri. Cl. Leuwenhoek easdem obſervationes narrat in epiſtola Ann. 1699. die 15. Septembris ſcripta à pag. 113. ad 126. quas prorſus cum his meis congruere perſpexi.


J. Mulder Sculp.

Explanation of Plate 56th

The Flowers here drawn I found in Standing waters, but saw no Leaves on them, the Stem grows to an Ell in Hight, & ye Flowers are like blue Crocus's, & on one of ye Leaves in each Flower is a blue & yellow Spot, like ye Fleur de lis, I observ'd a small Animal in these Waters, which ye Inhabitants call Water Scorpions, On ye 10th May 1701, I collected some of them which on ye 12th produced Winged Animals, one of which is drawn on ye Top of the Picture. — In these waters likewise breed a great many Frogs, having two Ears on their Heads, they were Wav'd with green & Brown, the Club at ye end of their Feet is a Digit or Inch in thickness, & with them they can both swim & support themselves upon ye Surface of Water or Mud; they lay their spawn upon ye Banks of these Waters, & kept some of it on a Turf in a Little Earthen Pot, with water pour'd upon it the better to observe their Metamorphosis, the Seed is a black shapeless spot, surrounded with a white Slime; in which it Lives & by degrees breaks out, & in about Eight Days ye Tail grows out, & ye Young (but formless) Frogs swim upon the Waters as I have drawn Five over ye large One, a few days after, the Eyes appear, & then in a short time ye hind Feet comes out, & in Eight Days more the Fore Feet break thro the Skin, after which ye Tail putrifies & falls off, & ye Frog becomes four Footed & perfect, going very often from ye Water to the Ground, It is to be noted, that to those which I kept, I frequently gave clean Turfs & Water, & as soon as I perceived ye Animals to stir, I fed them with Crumbs of Bread in ye Water, These observations exactly agree with those of the excellent Leuwenhoek, in his Epistle dated Sepr 15th 1699, from Page 113 to 126.



Explanation of Plate 57th

The Guajava here drawn is full of a better Juice than that in ye 19th Plate, & has not so many Stones or Seeds in it;

On this Tree I found a green Caterpillar, having on each side six white stripes, & a round black Spot between each Joint, & on ye hindermost Joint a Red Horn, On ye 20th May 1700, some of them became without motion, & Eating nothing for Four Days, chang'd into a Chrysalis's which are drawn towards ye bottom of the Stem, & from which, on ye 14th June, came ye first Moths, ye Wings of which were grey marbled with black & white, the Body was mark'd with Ten Orange colour'd Spots, & the Head furnish'd with a long Red Proboscis, with which it suck'd ye Honey from Flowers as it is here drawn.

The other Hairy Caterpillar I likewise found on this Tree feeding on the Boughs, the Hairs of some of them were white of others yellow, & ye Skin underneath them was like the Skin of a Human Body, This Caterpillar was so venemous that (as I was observing it) one of my Hand happening to touch it was immediately inflam'd with great Pain, they are furnish'd with four Feet, under ye Middle of their Body, but had Flaps or Holders growing out at every Joint, some of them spun up in March, others in May, their Bags were made of their Hairs which fell off; & I have drawn it Hanging among ye Leaves; These in about Ten or Twelve Days produc'd nothing but worthless Flies, nevertheless I had a great many of these Caterpillars.

Annotations

This is ye Malakka Pela, describ'd & drawn in pt. 3d of Hort: Mal: it has almost as many Names as Authors who have written of it, all which are collected in my Flora Mal: under ye Title of Guajava rubra acida, fructu rotundiore ——.



P. Sluyter Sculp.

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EXPLICATIO FIGUR. LVII.

HÆc *Guajava* fructus eſt meliore præditus ſapore, quam Guajava Icone XIX. expreſſa, neque etiam tot intus lapillis ſeu ſeminibus ſcatet.

Reperi in hac arbore genus aliquod erucarum, viride, ſex ſtriis albicantibus in utroque latere, rotunda nigricante macula in quolibet ſegmento, atque in poſtremo ex his rubente corniculo inſignitum. Anno 1700. die 20. Maji illarum nonnullæ immotæ jacentes, & per quatuor dies ab omni pabulo abſtinentes, in aurelias transformatæ ſunt, qualem infra cauli appoſitam cernis; unde 14. die Junii prima erupit phalæna, cujus alæ ex cinereo, nigro & albicante colore marmoris inſtar variegatæ erant, corpus autem maculæ aurantiæ decem ornabant, capite prælonga munito rubeſcente proboſcide, qua exſugebant flores, velut hic delineavi.

Aliud adhuc maxime piloſum erucarum genus in eadem arbore inveni, frondem illius depascens. Pili in quibusdam albicantes erant, in aliis flaveſcentes; cutis ſub illis humanam æmulabatur. Admodum ſunt venenatæ erucæ, ſic ut manus ipſa, quæ easdem tetigit, protinus inflammetur, cum maximis cruciatibus, velut ipſa hoc obſervavi. Quatuor licet pedibus in medio corporis inſtructæ, ſegmentorum tamen ſingulis innixæ proreptant. Nonnullæ Martio, aliæ ſerius Majo menſe telæ ſemet incluſerunt, quam ex propriis contexuerunt dejectis pilis, ceu inter folia pendet; atque hinc decem vel duodecim diebus elapſis nihil aliud, quam viles iſtiusmodi evolarunt muscæ, tametſi erucarum plurimas collegiſſem.

Hæc arbor eſt Malakka-Pela, *Part III. Horti Malabarici deſcripta & delineata. Tot fere habet nomina, quot de illa ſcripſerunt Auctores, quæ omnia in Flora Malabarica mea ſub titulo,* Guajava rubra acida, fructu rotundiore, *collecta reperiuntur.*

EXPLICATIO FIGUR. LVIII.

HIc ramum proceræ arboris delineavi, in ſylvis dumetisque Americæ nascentis, capſula ſeminali fabas nigricantes continente, unde nomen ſortita eſt arbor, Belgico idiomate *Zoete Boonen-Boom.* Cingit hasce fabas medulla albicans, ſuaviſſima dulcedine grata, quæ vermiculos mihi ſeu acaros exhibuit candicantes, ceu in ſiliqua aperta expreſſi, in aurelias fusci coloris degenerantes, & die 2. Aprilis, decimo poſt, in virides ejusmodi muscas transeuntes, veluti proxime ad acarum una cernitur.

Erucam inferius appendentem, foliis hujus arboris, pariter ac fronde plantæ Tab. XXXII. expreſſæ, nutrivi ad diem usque Junii 16. Anni 1700. cum in viridem mutata aureliam, hinc poſt elapſos decem dies in papilionem, qualis ſupra in ſiliqua hæret, transfigurata eſt.

Alias adhuc maxima copia in hac arbore erucas obſervavi, formatas, ceu in caule ſuperius repere unam cernis, quæ pilis flavis atque nigricantibus ſetis onuſta, dejectos poſtmodum pilos ſcatulæ, ubi reſervata erat, agglutinabat, telam cineritii coloris ovatam inde contexens, ut in virente conſpicis folio. Huic incluſa nido in aureliam, atque dein, ſpatio trium dierum, in muscam transiit; reliquis hujus generis omnibus ſimili modo intextis ſimilem metamorphoſin ſubeuntibus, muscis prodeuntibus, quarum alæ fusco, corpora rubicundo, viridi, aureo, argenteoque colore picta nitebant.



P. Sluyter Sculp.

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Explanation of Plate 58th.

In this Plate I have drawn ye Bough of a High Tree which grows in ye Woods & Hedges in America, the Heads of Seed contain black Beans, from whence arises ye Dutch name Zoete Boonen Boom(ie) ye sweet Bean Tree, These Beans are surrounded with a white Substance of an excellent sweet taste, in which I found certain white Vermin or Maggots, which I have drawn upon ye Pod, they chang'd into Chrysalis's, & Ten days after (being April 2d) produced green Flies, one of which is drawn by the worm, The Caterpillar drawn Hanging at ye bottom of ye Plant, I fed with Leaves of this Tree; & likewise with Boughs of ye Plant, describ'd in Pg: 32d. On ye 20th June 1700, it chang'd into a green Chrysalis, & in 10 Days into a Butterfly, which is drawn towards ye Top of ye Pod.

I, likewise found on this Tree, great numbers of ye Caterpillars, one of which is drawn at ye Top of ye Stem, it was cover'd all over with Hairs which were yellow, & which falling off, it stuck them together, & made them into a Bag of an Oker colour, which is placed on ye Green Leaf, & in which it chang'd into a Chrysalis, & three Days after into a Fly, The others of this kind underwent ye same changes, & produced Flies whose Wings were brown; & their Body Red and green, with Gold & Silver colours.

Explanation of Plate 59th

In ye Waters at Surinam grows a kind of Nasturtians, having thick smooth and Succulent Leaves, The Stem is a Yellowish green, ye Flowers are of a Pale Red, & serve both as spinage & Sallad, After I had determin'd to Print these Works it seem'd to me, that this Plate was ye most Proper, in which to place these Water Animals or Toads, ye Female receives ye Seed into her Womb, which is all ye length of her Back, in which it is Nourish'd till it comes to Maturity and Life, when they break their way thro the skin one after another, as they come out of ye Egg, Having observ'd this I preserv'd ye old one in Spirit of Wine, together with ye remaining Fœtus, some of which had only ye Head, & others part of ye Body out; The slaves in that Country Eat these Toads, accounting them very good Food, their colour is brown & Black, their Fore Feet were like those of a Frog, & ye hind ones like Duck's Feet; Having caus'd a great many of these shells to be fish'd out of ye Sea, they contain'd living Animals, some of which were pull'd out by force, & ye fore part of them resembled a species of Crabs, but ye hinder part was exactly like a Shell Snail, they rested in the Day, but in ye Night they made a great Noise in the Shells with their claws & were very Unquiet. ——



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EXPLICATIO FIGUR. LIX.

CRescit in aquis Surinamenſibus ſpecies quædam *Naſturtii*, foliis craſſioribus, glabris & ſucculentis, caule cum flavedine viridi, flore pallide rubicundo, quæ pro Spinachia & acetariis inſervit.

Cum in eo jam res ſit, ut meo de Inſectis Operi coronidem imponere decreverim, non incongruum erit, huic Naſturtio aquatico adhuc animal aquaticum, *Bufonem* ſcilicet, apponere. Fœmina ex animalibus ejus generis in dorſo gerit fœtus ſuos, quippe uterus ad longitudinem dorſi poſitus ſemina concipit, fovet & nutrit, usque dum maturitatem vitamque nacti ſint fœtus, quando ipſi per cutem ſibi pariunt viam, unus poſt alium ſenſim velut ex ovo erumpentes. Ego vero ea re perſpecta, matrem conſervavi in Spiritu Vini cum reliquis fœtibus, quorum nonnulli capite ſolum, alii parte corporis dimidia jam emerſerant. Comeduntur iſthuc loci à mancipiis bufones illi, neque cibus iisdem creditur eſſe contemnendus. Coloris ſunt è nigro fusci, pedibus anterioribus ranam, poſterioribus anatem æmulantes.

Conchylia quoque ubi ſervos è fundo maris expiscari juſſiſſem, quænam includerent animalcula, inveſtigatura, plura eorundem collegi, animalculis adhuc vivis inhabitata; horumque nonnullis vi extractis, illa parte antica ſpecies cancrorum, poſtica eſſe limaces conchæ implicitos, obſervavi. Interdiu quiescebant, noctu vero pedibus ſurde in domiciliis ſuis obſtrepebant, admodum inquieta.

EXPLICATIO FIGUR. LX.

ANni 1701. menſe Januario in agro Surinamenſi vepretum ingreſſa, numquid detegere poſſem, hinc inde perſcrutatura, florem iſtum pulchre rubentem in arbore quadam reperi, cujus nomen & natura illius regionis incolis ignota erant.

Erucam quoque tum temporis inveni prægrandem, rubicundam, tribus veluti coralliis cœruleis in ſingulo ſegmentorum, & in quolibet corallio pluma nigricante inſignem. Fronde hujus arboris eandem alere mihi propoſueram, telæ autem ſtatim ſeſe intexuit, in raram hujusmodi aureliam degenerata, ut adeo an veram ei præbuerim escam nec ne, incertam me lateat. Die Januarii 14. tam formoſus inde productus eſt papilio, alarum poſticis intus nitide cœruleis, anticis cum albicante ſtria cœruleo mixta fuscis, veluti expreſſum hic in volante dedi: alas autem exteriores ornant arcus rotundi tres, nigricante, flavo & fusco colore tincti ac pulchrè flammei, ceu in quiescente delineavi. In Belgio *de Groote Atlas*, hoc eſt magnus Atlas, nuncupari ſolet.

Ferum aliquod genus vesparum, quas incolæ *Maribonſe* vocant, ubique Surinami, tum in ædibus, tum in agris, frequens eſt. Coloris ſunt fusci, neque homines ſolum ſed & bruta cuncta, quæ ipſas propinquitate moleſta in opere ſuo turbant, aggrediuntur & pungendo aculeis ſauciant. Nidos perinde ac in Europa variæ elegantis ſtructuræ conficiunt, ſpectatu dignos, & de mira earum ſolertia teſtantes, quam concinne eadem ſibi adverſus pluviæ ventique injurias conſtruant domicilia, tantum, ut ſemina fœtusque conſervata reponantur. Semen hoc ipſarum primùm vermem producit album, qualis infra juxta erucam poſitus eſt, qui pedetentim in feras iſtiusmodi apes, peſtem illius regionis, transformatur.



J. Mulder Sculp.

Explanation of Plate 60th

In the Month of January 1701 going into y^{e} Fields at Surinam, I found this Bramble, & looking after it, I found that it grew into a Tree, bearing beautifull red Flowers but the Inhabitants could not inform me either of its name or Nature.

I found on it (at ye same time) this large red Caterpillar, having between each Joint three Sky colour'd Bumps or knobs, out of each of which grows a black Feather, I suppos'd that it fed on ye Leaves of this Plant, but immediately after I had it, it chang'd into this rare Chrysalis Spining up in a Bag, so that I could not discover what it fed on, on ye 14th Jany it produced this most beautifull Butterfly, the inside of the Wings (as it is here drawn flying) were a beautifull Sky colour, in ye hind ones; & in ye fore Wings it was mix'd with brown and a white Stripe on each, On ye outside of the Wings it had a round Spot of three Circles, the colour of which were black yellow & brown, with a Beautifull Flame colour, as it is drawn resting, by ye Dutch it is call'd de Groote Atlas, (ie) The great Atlas, This fierce Wasp, call'd by ye Inhabitants Maribonse, is common at Surinam, both in ye Houses & Fields, their colour is brown, & they are a great Nuisance both to Men & Beasts, by Pricking and wounding them with their Stings, they make their Houses in ye same manner as those of ye European Wasps, but of Elegant & various structure worthy of Observation, & sufficiently testifying their admirable Cunning, for they form them so providently against ye injuries of ye Wind & weather as sufficiently to preserve their Seed & young ones, Their Seed at first produces a White Worm, which is drawn under ye Caterpillar and by degrees changes into these Wasps, which are the Pest of those Countries.

Explanation of Plate 61st

This Plant, which is call'd Guajava alba dulcis is Accurately describ'd in Page 19th & is drawn with ye Fruit in ye 19th Plate, I found on it a Caterpillar which fed on the Leaves, & on ye 24th Feb: chang'd into a Chrysalis, from whence on ye 2d March came a Moth, ye Body of which was white, adorn'd with yellow & brown Spots, The Head & Back of the Caterpillar was black, a little inclining to white, ye rest of of ye Body was of a fine yellow colour, the whole Body was cover'd with brystly Hairs, which in ye hind part was black, but in ye fore part & under ye Belly, of a beautifull yellow, the Chrysalis was brown with black Hairs, & ye Head which has no Hairs is adorn'd with a Red and White Circle. The other large Caterpillar, which I found on ye same Trees is of a somewhat blackish colour & had a full black Stripe down ye Back, from ye Head to ye Tail, ye rest of the Body was circled with black, & underneath ye Belly it was Spotted with white, ye Head & Tail being Purple; These Caterpillars were so numerous, that I had above 50, of them, This on ye 30th Augt. chang'd into a grey Chrysalis striated & spotted with a brownish colour from whence on ye 16th Septr. came this large Moth, ye Body of which was White, streaked with four black Spots, in such a manner that it resembled four Crooked Lines of black & as many of white, the upper Wings were Spotted with white & a Darkish colour, the under ones were of a beautifull Yellow, & underneath of a Darkish colour.



EXPLICATIO FIGUR. LXI.

PLantam hanc, quæ *Guaiava alba dulcis* vocatur, pag. 19. accúraté deſcriptam, & ſimul cum ejus fructu tab. 19. delineatam reperies. Eruca vero, quæ hujus frondes depaſcit, die 24. Februarii in Aureliam transformata eſt, unde 2. die Martii Phalæna erupit, cujus album corpus maculæ é flavo fuſcæ ornabant. Erucæ caput & dorſum nigrum paulatim declinat ad album colorem, deinde pulcherrime flaveſcit, ac in poſteriori corporis parte nigerrimos ſpinoſosque pilos, uti in anteriori, & ſub ventrem pulcherrimos flavos gerit; Aurelia perfuſca eſt, & nigris pilis, ſicuti calvum ejus caput rubro alboque circulo, ornatur.

Magna verò illa Eruca, quæ in eàdem arbore reperiebatur, ſubnigra eſt, dorſum de capite uſque ad caudam nigrä ſtrià, ceteraque pars corporis nigris circulis, inſignita ſunt, at ventrem verſus albi punctuli, uti in capite & caudâ purpureus color conſpicitur, hujus generis Erucarum adeò frequens copia eſt, ut ipſa plus quam quinquaginta poſſedi. Hæcce autem 30. die Auguſti in Aureliam cineream, perfuſcis ſtriis ac maculis decoratam, mutata eſt, unde 16. die Septembris magna hæc Phalæna erupit, cujus corpus ſtria candida, quatuor maculis nigris adumbrata, adornat, quam juxta utrinque quatuor lineæ obliquæ nigræ, ac ſimiles quatuor ſtriæ ſive maculæ albæ viſuntur. Maculis ſubobſcuris albiſque alæ ſuperiores variegatæ, at inferiores ſuperné crocei, ſubtus ſubobſcuri coloris ſunt.

EXPLICATIO FIGUR. LXII.

FRuctus hic Ramus eſt arboris, Papay dictæ, unà cum ejus floribus, pulcherrime albicantibus & interius aureis, cujus deſcriptionem pag. 40. antec. Lector videat. In dicta arbore reperta eſt ſuperior Eruca, viridis luteique coloris, in primo poſt caput ſegmento puniceum ocellulum & orbicularem maculam albam oſtendens, cujus a latere duæ aliæ maculæ ſubrotundæ, cuſpidatim prædictum ocellulum circumcurrentes, viſuntur. Celerrimé hæcce Eruca curſitat, magnaque ſe vi defendit & pugnat. Die 16. Maji in fuſcam & valde & incandeſcentem aureliam, nigris maculis circumdatam, transformata eſt, unde ſeq: die 19. Junii hæcce Phalænâ, quæ Belgico idiomate *Brummer Vyl* dicitur, erupit, multifarii coloris maculis & ſtriis ornata & variegata.

Prægrandis verò inferior Eruca in eadem arbore reperiebatur, & ex fuſco deorſum, at ventrem verſus ex albo colore eſt, & marmoris inſtar variegata & in utroque latetere ſex recurvis uncinulis albicantibus ornata eſt, caput autem nigrum clypeum, duabus crucibus, adamantis inſtar fulgentibus, oſtendit. Die 12. Maji in aurei coloris Aureliam transformata eſt, unde 12. die Junii hæcce Phalæna, quam *Brummer Vyl* apellamus, erupit, binis oculis majuſculis, valde extuberantibus, in dorſo ſtriâ albâ nigriſque lineis tranſverſis, & in utroque latere albis nigriſque maculis ornata eſt, ſuperioribus alis ex ſubobſcuro, fulvo, nigro alboque colore marmoratis, inferioribus verò ſurſùm ex aureo, deorſum ex ſubobſcuro colore, in fulvam & denticulatam marginem finit, & evaneſcit.



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Explanation of Plate 62d

This is a Bough of ye Tree Papay (described in Page 40th) together with ye Flowers which are of a beautifull white with Gold colour in ye middle, on this Tree I found ye uppermost Caterpillar of a green & Clay colour, on ye first Joint behind ye Head, it had a Scarlet Point resembling ye Ball of an Eye, and is Circled round with a white Circle, & on ye outside of that are two White Spots, ye Points of which seem to surround ye Eye; This Caterpillar runs very swift & Fights to defend itself with great Force, On ye 16th May it chang'd into a large brown Chrysalis, circled with black, which was very Hot, & from which on ye 19th June came a Moth which is call'd in ye Dutch Language Brummer Uyl, & was adorn'd & varied with spots, & stripes of many colours;

I likewise found ye lower large Caterpillar on this Tree, it was brown on ye Back & white underneath, varied like Marble, On each side it had six Crooked stripes, & behind ye Head a black Spot in ye Shape of a shield, shining like an Adamant & having two Crosses upon it, On ye 12th May it changed into a Gold colour'd Chrysalis, from which on ye 12th of June following, came this Moth which we call Brummer Uyl, having two large Eyes standing a great way out, it had a white stripe on ye Back, with Cross lines of black, & adorn'd on each side with six spots of black & as many of white, ye upper Wings are of a full yellow, & sad colour'd, Marbled with black & white, The under Wings were likewise sad colour, which Vanishes in a yellow & indented Edge.

Explanation of Plate 63^d

I first found this large Caterpillar on ye Tree call'd by ye Dutch de Cacauboom; it was of green & Dun colour, & cover'd all over with Prickly Hairs which were clay colour'd on ye Back & green underneath, On ye 16th of June it Spun a Bag, & chang'd into a Chrysalis of a brown colour, from which 16th Septem^r following came a Rose colour'd Moth, ye two hind Wings of which had each of them a large White Spot, circled round with a broad black Edge, & having in ye middle of it Corner'd Spots, some large & others small, This Caterpillar was so venomous that when I first touch'd it, it wounded my Fingers so, that they immediately grew red & swell'd up with great pain even to my Elbow, for the cure of this they applied Oyl of Scorpions, which within half an Hour took away all ye Pain; after this I view'd it thro my Microscope, I found it cover'd all over with Splinters or Hairs, which under it were thick & green; but on ye upper parts slender & Black, these were those that stuck in my Skin, & Occasion'd ye swelling; against which as well as against ye Poison of other Animals, ye Oil of Scorpions is always ye best Medicine. — The other Caterpillar which has no Hairs are various with Circles & stripes of black all over their Body, which is of a Gloomy white, spotted over with Red, I found it on ye Grass on ye which it fed, On ye 7th Feby it chang'd into a grey Chrysalis, & on ye 25th following came out this beautifull Fly, which was grey with a white gloom & spotted with silver, the hind Wings of which were shap'd like Sails;

Annotations

This is y^e Cacari Cacavifera &c of Hernand: in Histor: Mex^a & y^e Amigdalis Similis &c, of C. Bauhin; it is call'd Cacao America sive Avallana Mexicana by J. Bauhinus & Chocolata by Piso, in Mantissa Aromat:


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EXPLICATIO FIGURÆ LXIII.

MAgna hæcce Eruca prima in arbore, belgicé *de Cacauboom* dictâ, reperta eſt, utpote quæ illam depaſcit, eque luteo viridis coloris eſt. Spinoſi autem Pili, qui ſubtus virides, deorſum lutei ſunt, totum corpus muniunt. Die 21. Junii telam contexuit, & in fuſcam aureliam mutata eſt, unde ſeq: die 16. Septembris magna illa Phalæna erupit coloris roſei, cujus alas inferiores magnæ duæ maculæ albæ, quas nigerrima & lata margo circumcurrit, ornant, cujus in medio anguloſa & parva & magna macula conſpiciuntur. Admodum venenata hæcce Eruca eſt, cum attingentes digitos meos priores vulneravit, ita ut ſtatim purpurarent flaveſcerentque cum maximis cruciatibus manus meæ uſque in cubitum, ad quos tollendum ſtatim oleo Scorpionio utebar, quod intra horæ dimidium omne cruciamentum tollebat. Poſt hæc per microſcopium ſpeculabar, eamque plenam ſpinulis punctiſque comperiebam, qui ſubtus virides & craſſi, ſuperne verò nigri & tenues erant, & abruti in cute mihi hærebant, & veneficii hujus auctores exſtabant, ſemper autem oleum ſcorpionoleum contra talem læſionem Erucarum aliorumque animalculorum optima Medicina comperta eſt.

Altera iſta Eruca nullam ſpinam habet & pene depilis eſt, at varii coloris, & nigris circulis & lineis ornatur totum corpus ejus album ex glauco, ubique rubris punctulis conſitum. In gramine, quod depaſcit, reperta, atque 7. die Januarii in cineream aureliam transformata eſt, unde ſeq: 25. die ejuſdem menſis pulcherrima prorupit muſca, coloris cineritii & albi ex glauco, argentoſis maculis ornata, cujus alæ inferiores caudas alaſque gerunt.

Hæc arbor *Cacari Cacavifera*, ſive *Cacava Quabuitl* ab Hernande in hiſtoria Mexiocana vocatur. *Amigdalis ſimilis Guatimalenſis* a C: Bauhino. *Cacao Americæ* ſive *Avellana Mexicana* a J. Bauhino *Chocolata* a Piſone in Mantiſſa Aromatica.

EXPLICATIO FIGUR. LXIV.

PAg. 40 & 62 folium atque florem arboris Papajæ æri inciſa vidimus. Iterumque hâcce tabula exhibetur arbor ſimul cum ejus fructu & quidem in maximo vigore, qui, adhuc immaturus, albus eſt, & quo magis matureſcit, eo flaviorem, tandemque aureum colorem exhibet, & ſuavis atque grati ſaporis eſt. Intus parva ſemina nigra condit adinſtar Grani piperis; quæ ſemimatura, inter carnes coquuntur & foventur, uti cinararum ſellæ. Cum verò ſemine & cortice ſolutus eſt fructus in longis graciliſque partibus diſſecatus, ad ſicca humidaque condimenta paranda, quæ valde ſapida ſunt, uſurpatur. In hocce fructu quoque ſupradepicta Eruca reperta eſt, optime ex flavo & ſubviridi colore variegata, quæ 2. die Martii telam contexuit & in cineritiam aureliam mutata eſt, unde ſeq: 20. die Martii magna illa Phalæna, quæ belgice *Brummer Uyl* vocatur, erupit, conſimilis omni modo Phalænæ, quæ belgico idiomate nominanatur *de groote Onruſt* ſive *'t Camperfoelibeeſt.*

Inferior fuſca praſina Eruca in utroque latere ſtriâ, ex flavo rubroque colore intermixta, de capite ad caudam ornata, in capite ſemi rotundum clypeum gerit, adinſtar Adamantis coruſcans, & Arborem, vulgo *de Papayboom*, inhabitat; die 14. Novembris in fuſcam Aureliam transformata eſt, in capite roſtrum, quod ſe pectorem verſus incurvat, gerens, unde ſequenti die 28. Novembris magna hæc Phalæna, quam noſtrates *de Brummer Uyl* vocitant, erupit, colore lucido pullo & albo acuminatim variegata, cujus corpus ſtriis roſeis ac nigris & dorſum una tantum cineritiâ ſtriâ, nigris maculis protextâ ornabantur.



Explanation of Plate 64th

In the 40th & 62d plates the Tree Payaya is drawn with its Leaves & Flowers, & in this with ye Fruit in its full Prime & vigour, at ye first of its putting out it is white & grows more yellow as it ripens, till it becomes of a Golden colour, & of a sweet & delightfull Taste, It is full of small seeds like grains of Pepper & black, these when they are half ripe being dreſs'd with Meat, Taste like Artichoke bottoms; they likewise gather the Fruit whole, & cutting it into long thin pieces, make thereof wet & dry sweetmeats of a very delicious Taste.

I found on this Fruit, ye uppermost Caterpillar, beautifully varied with yellow, & greenish colours, On ye 2d March it spun a Bag, & chang'd into a grey Chrysalis, from which March ye 20th came a large Moth, call'd by ye Dutch Brummer Uyl, which is in every respect like those other Moths which are term'd in ye Dutch Language de Groote Onrust, or Camperfoelibeest. The lower brown Caterpillar is striated with green on each side from Head to Tail, & likewise with yellow & Red; behind ye Head it bears a Shield of a Half round, which shines like Adamant, it inhabits ye Tree call'd Papay boom, On ye 14th Novr it chang'd into a brown Chrysalis, having a Beak upon its Head, which turns upon its Neck; from this Chrysalis, on ye 28th of Novr came a large Moth, call'd by ye Dutch Brummer Uyl, (marbled as it were) in sharp points of black and White, the Body is striated with black & Rose colour, with a grey stripe, Adorn'd with Pointed black spots all down ye Back.

Explanation of Plate 65th.

This Caterpillar is of a beautifull yellow colour, & Red, under the Belly & has a large Flame colour'd stripe upon the Tail, it inhabits ye Citron, & Eats ye Boughs thereof, but is but seldom found, On ye 25th Feb: it spun a Bag & chang'd into a Chrysalis, the Threads of ye Bag were of such Silk as excells that of ye SilkWorm both in Splendor & thickneſs, & it is to be lamented, that so few of these Caterpillars are found, for I am certain that great profit might be made by them, if they could be bred as easily as other Caterpillars, tho I believe no one ever yet attempted it. On ye 25th March it produced a large Moth: which was gold colour'd & Red striated with white, both in ye upper and under Wings, on each of which it had a bright Spot shining like Icing Glaſs, surrounded with a white Circle, & round that with a black one, so that it looks like a Looking Glaſs set in a Case, & those who are of that opinion, call ye Caterpillar Spiegeldrager, or the Looking Glaſs bearer. —



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EXPLICATIO FIGUR. LXV.

ERuca illa, quæ pulcherrime flaveſcit, & ventrem verſus rubicunda eſt, magnam ac flammatam in caudâ tignam gerit. Citrum inhabitat, ejusque frondes depaſcit, at raro occurrit. Telam die 25. Februarii contexuit, & in Auliam transformata eſt, cujus filum ſpecies ſerici erat, quod aliorum Bombycum telas & multitudine & fulgore antecellit. Dolendum eſt, tam paucas hujus generis Erucas inveniri, cum certa ſim ex his majus emolumentum acquirendum eſſe, ſi modo tam facile, quam aliæ, educari poſſent; quod tamen, ni fallor, nullus unquam aggreſſus eſt. Inde ſeq. die 25. Martii hæcce Phalæna prorupit, quæ permagna & aurei ac rubicundi coloris eſt, ac ſtriis albis, tam in ſuperioribus, quam inferioribus alis ornata, in quarum unaquaque, adinſtar vitri fulgens, macula, perlucida & duobus circulis, interiore ſcilicet albo, extimo autem nigro, circumſepta, apparet, ita ut hæcce macula haud ſecus, quam ſpeculum, pluteo circumducta, conſpiciatur, quamobrem hæcce Eruca ab fautoribus ſpeculi portator, ſive belgico idiomate *de Spiegeldrager* appellatur.

EXPLICATIO FIGUR. LXVI.

PLurimi,tam Indiæ Orientalis, quam occidentalis operis rarioris amatores ſibi imaginantur, & affirmant, imo vidiſſe ipſos dicunt animalculum, quod belgico idiomate *het wandelende Blad* vocatur, in ipſis arboribus provenisſe, unde maturatum delabitur, ac deinde ſe in pedes dat, ſive avolat; ſed re verâ magnus error eſt, ex merâ ignorantiâ profectus, cum animalculi originem nunquam perſcrutati ſint, & hoc æque, ac alia animalcula, ex ovis producatur. Ex ouis autem omnes ante nominatæ Phalænæ oriuntur, quæ poſt naturales conjunctiones eo loco deponuntur, quo inde producenda animalcula illico alimentum ſuum capere queunt, & primo vermiculi, ſive Erucæ ſunt, quæ manducantes creſcunt & augeſcunt, atque jam in juſtam ſtaturam excretæ, telam contexunt, & in aurelias transformantur, quarum hæ longiori, illæ breviori tempore ad perfectum vigorem conſequendum egent, quæ tandem inde prorumpunt ac proveniunt omnes humidæ, & maxime contortæ, at interdum illarum alæ intra minus, quam ſemi-horæ ſpatium, poſtquam paululum agitarunt & commoverunt ſeſe, exareſcunt, atque extenduntur, ita ut omni modo perfectæ Phalenæ hinc conſpiciantur, quæ, ita mutatæ, decies & amplius majores ſunt, quam ipſæ Aureliæ, in quibus jam pridem recludebantur.

Hocce Animalculum, belgice dictum *het wandelende Blad*, utpote Locuſtarum genus, eodem modo naſcitur: quæ autem de illo expertus ſum, enarrabo. Negrus meus, cui ſemper injungebam ubivis in ſylvis vermes, Erucas, aliaque animalcula indagare, coarctatum mihi folium apportavit, quod ſubtiliter recluſum aliquot mihi praſina ova conſpicienda dabat ad coriandri magnitudinem, unde poſt paucorum dierum intervallum parva animalcula nigra naſcebantur adinſtar parvarum formicarum. quæ ſubinde accreſcebant & eandem formam, quæ priora, & hic effigiata, aſſequebantur, donec plenâ magnitudine & alis potita eſſent, uti figura 2. demonſtrat. In Aurelias verò non mutantur, ſicut Phalænæ, ſed juſtam menſuram conſequuntur augmento membrorum, veluti hoc genus animalculorum perpetuo ſolet. Horum alæ viridi folio ſimiles ſunt, ſimilibuſque fibris muniuntur. Varia genera reperiuntur; nonnulla enim viridis hilari, nonnulla viridis fuſci & alia rurſus varii ac cinerei coloris ſunt: non raro etiam nobis occurrunt, quorum alæ aridis foliis conſimiles videntur. Inter illa, quæ in India Orientali proveniunt, unum datur, cujus alæ ſuperiores, tam coloris quam formæ ergo, ſimillimæ foliis Citri ſunt. hæcce Animalcula in nidulis ſuis, arbori impoſitis, juſtam formam aſſecuta, uti figura prima demonſtrat, aliquantulum ſe telæ integunt & magnopore commovent, donec alæ omnimodo liberæ atque expanſæ ſunt, unde magis evaleſcunt, contectam telam frangunt & de arboribus cadunt, ſive avolant. Cum verò horum alæ virides ſint, & folii formam oſtendant, inexperti crediderunt ipſa animalcula in arboribus proveniſſe.

Ne locus hujus Tabulæ vacaret, ſubtus hic genus Glyris ſylveſtris depictum eſt, qui catulos, quorum vulgò quinque vel ſex unâ fæturâ enititur, in dorſo ſecum portat: ex flauo fuſci coloris, at ſubucula ejus alba eſt. cum antra exeunt alimenti cauſa, a catulis circumcurruntur, qui jam ſaturi, vel moleſtias ſuſpicantes, ilico matris dorſum aſcendunt, & caudas ſuas parentum caudis involvunt, qui illos ſtatim in antra apportant.

Hujus autem generis Glirium varii reperiuntur, at præcipuus vere eſt, qui belgico Idiomate *de Zak of Beurs-rot* appellatur, quorum femellæ ſemper catulos ſecum in ventro gerunt, qui pabulandi ergo prodeunt, &, alimento ſumpto, rurſus matris ventrem irrepare ſolent.



Explanation of Plate 66th

— Many of the Lovers of Curiosities both in ye East & West Indies have believ'd & affirm'd, that they have observ'd ye Animals call'd in ye Dutch Language Het Wandelende Blad, to be bred by this Tree, & that when they come to Maturity they they drop off from it, & can both creep & Fly, but it is a great error and proceeds from meer Ignorance for want of Knowledge in ye Generation of these Animals, which are produc'd of Eggs, like all other Insects, for all ye Moths that have been already described in this Work are produced of Eggs, which after their Natural Conjunction they lay in ye place where they are, & from which are produced the Caterpillars, which seek their Food in ye same place where they happen to come out, & by which they grow, till they come to their full bigness, when they Spin up in Bags & became Chrysalis's of which some are Perfected sooner & others later, which done they break out of the Chrysalis all over Wet, & Wrinkled up but (sometimes) in half an Hour, when they have a little shook themselves, their Wings grow out, & are extended, & ye Moth being thus perfected, is above Ten times as big as ye Chrysalis, in which it was Just before shut up — This Animal then (which ye Dutch call het Wandelende Blad) is a kind of Locust, & is Generated as above, the manner of which I shall relate, as being well Acquainted with it, I had a Negro Servant whom I order'd that whenever he saw any Caterpillar, Worms, or other Animal in ye Woods, he should roll them up in a Leaf & bring them to me, he therefore brought me one Day (very Ingeniously folded up) certain green Eggs, of ye bigness of a Coriander Seed, from whence a few days after, came a small black Animal, like a little Ant, which soon grew larger but kept ye same Shape, till they came to their Perfect bigness, & ye Wings were grown out, as ye second figure represents it, for they do not change into Chrysalis's as ye Moths kind does, but in a determinate time become perfect, as is ye manner with all these kind of Insects; their Wings are green like a Leaf, with veins also like one. There are various kinds of them, some of which are of a light & pleasant, & others of a brownish green, & others grey, there are likewise great Numbers ye Wings of which look like a Dead Leaf, among those which are found in ye East Indies, there is one species ye upper Wings of which both in colour & shape resemble ye Leaves of a Citron; these Animals in their Habitation on ye Tree exactly resemble ye first of these here drawn, they are cover'd with their Bags or Houses, in which they move about, & are very unquiet, till their Wings are grown out, & their Strength Perfected, when they break ye Bag & either fall down upon ye Ground, or Fly away from ye Tree, & their Wings being shaped like a Leaf, ye Unskiffull believe that they grow upon ye Tree —

To fill up ye vacancy in this Plate, I have drawn underneath ye Figure of a Wood Mouse which carries ye Young ones on her Back, of which they commonly bring forth 5 or 6, at a time, they are of a yellowish brown colour, & white under the Hairs, when they go abroad to seek for Food, ye young ones run about them, & when their Hunger is satisfied, or if any thing molests them; they mount upon ye old ones Back, winding their Tails about her Tail, in which posture she carries them Home; there is another species of these mice, which ye Dutch call de Zak of Beurs-rot, ye Female of which carries ye Young ones in her Womb, from whence they come for Food, & then return into it again —

Explanation of Plate 67th

I found this large Caterpillar marbled with various colours on ye Fig Tree on ye Boughs of which it feeds; when any one molests it, or attempts to take it, it puts out two Orange colour'd Horns out of its Head, with which it defends itself, & which are full of a Scarlet & Deadly poison, on ye 13th of June it spun a Bag, & chang'd into a yellow Chrysalis, spotted with a flame colour'd brown; from whence on ye 21st Day following came this beautifull Butterfly of an Indico colour, with greenish & brown, & a little inclining to a Silver colour;
The other small Caterpillar is greenish striated with white, I found it likewise on ye Fig; & was posess'd of several of them, but they all Died before ye time of Change, except this one, which on ye 14th of Augst spun up in a Bag, & chang'd into a Scarlet Chrysalis, having a Beak upon its Head in ye shape of a Thorn; from this Chrysalis on ye 21st Day following came this Moth, ye colour of which was yellow varied with grey & white.



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TXPLICATIO FIGURÆ LXVII.

MAgna hæc varii coloris & marmorata Eruca in Ficu commoratur, cujus frondes depaſcit; quando illæ quiſpiam moleſtus eſt, vel arripere conatur, juxta caput duo aurantia cornicula extendit, quibus ſe defendit, & quorum punitio maximum venenata, & dolorifica eſt. Die 13. Junii telam contexuit, & in flavam aureliam, fuſcis flammeolis conſitam, mutata eſt, unde Die 21. ſequenti hæcce pulcherrima Phalæna erupit, quam color indigo, ſubviridis & fuſcus, at paululum argenteo ſimilis, ornat.

Altera vero iſta Eruca parva ſubviridis eſt, & ſtriis albis depicta, atque, uti antenominata, in Ficu reperitur. varias hujus generis poſſedi; aſt omnes, antequam transformandi tempus adeſſet, moriebantur, hæcce tamen ſola Die 14. Auguſti telam contexuit, & in puniceam aureliam transformata eſt, quæ in capite roſtrum, ſpinæ ſimile gerit. unde Die 21. ſequenti hæcce Phalæna, quæ ex flavo, cineritio & albo colore variegata eſt, erupiebat.

EXPLICATIO FIGUR. LXVIII.

MAgna hæc, & pulcherrimis ſpinis ornata Eruca à Negro mihi ex ſylvâ allata eſt, ita ut nulla mihi notitia ſit herbæ aut frondium, quas depaſcit: pulcherrimé aureo & crameſino colore variegata eſt &, egregie ſplendeſcit. Die 10. Septembris in brevem, craſſam & triangularem Aureliam mutata eſt, coloris glauci at ſubpallidi, unde die 12. Octobris optima hæc Phalæna erupit, cujus quatuor alarum partes ſuperiores cæruleæ, inferiores fuſcæ ſunt, maculis aureis adornatæ; infernè vero cæruleo, fuſco & aureo colore, adinſtar marmoris, depictæ ſunt, & unamquamque alam ſex rotundi ocelluli adornant, quorum ora nigra eſt, circulus ſecundusaurei, & macula media albi coloris eſt.

Eruca altera, quæ flava eſt, & nigris maculis ornata, mihi, ſicuti illa ſupra-deſcripta, allata eſt, aſt alimenti ſolennis pene inſcia ſum: Die 14. Novembris in pulcherrimam aureliam coccinei coloris transformata eſt, unde Die 28. ejuſdem menſis hæcce Phalæna, quam nos Belgæ *de Brummer Vyl* vocamus, prorupit, quæ adinſtar marmoris ex fuſco flava & alba erat.

Hujus etiam minutiſſimæ Erucæ, quæ cineracei coloris eſt, alimentum ſolenne omnino latet; Die 2. Auguſti in coccineam aureliam transformata eſt, unde Die 10. ejusdem menſis hæcce parva Phalæna, quæ Belgice *een Brummer Vyltje* dicitur, erupit, quæ ex ſqualido, flavo, fuſco, alboque colore, adinſtar marmoris, depicta eſt.


66

Explanations of Plate 68th.

This large & beautifull Caterpillar (adorn'd with Thorns or Bristles) was brought to me out of ye Woods by my Negro Servant, so that I could not tell what Herb, or Bough it fed on, it was of an Elegant Scarlet & Gold colour, & shone most beautifully. On ye 10th Sept. it chang'd into a thick, short, & Triangular Chrysalis, of a Pale gloomy colour, from whence on ye 12th of Oct. came this most beautifull Butterfly, ye upper Wings of which were Sky colour'd, the lower brown Spotted with Gold, On ye under side they were varied with Sky colour brown & Gold, & on each Wing were six round Spots resembling Eyes, ye Edge of which was black, ye second Circle Gold colour, & ye middle spot white.

The other Caterpillar (which was yellow spotted with black) was brought to me after ye same Manner, so that I cannot tell what it fed on; On ye 14th Nov. it chang'd into a beautifull Chrysalis, of a Cochineal colour, from whence on ye 18th of ye same Month came this Moth, which ye Dutch call Brummer Uyl, marbled with brown, yellow, & white; I am likewise ignorant of ye Food of this very small grey Caterpillar, which on ye 2d of Augt. was chang'd into a Cochineal colour'd Chrysalis, from which on ye 10th of that Month came a small Moth, which ye Dutch call een Brummer Uyltje, marbled with a Dirt colour, yellow brown & White.

Explanation of Plate 69th

Here is represented ye Figure of a Crocodile which ye East Indians call Cayman; it is an exceeding Strong & Potent Enemy as well to Men as to all Animals whatever, either on Land or in ye Water, for it lives in either, & devours whatever it finds in its way, The Egg which it comes from is about ye bigneſs of a Goose Egg; which makes it seem impoſsible, that coming from so small a Habitation, it should presently grow six or Eight times bigger than ye Egg itself; one of which I took from ye entrance of a Hole, where ye old one inhabited, & tho it was so small, yet ye Creature which it produces grows ye largest of any thing that comes from an Egg; for ye Crocodiles are commonly 20 Feet or more in Length, their Head Back & Tail, are Scaled so hard, that they are Invulnerable, but ye Skin of their Belly is soft, so that they may be easily wounded in that part; their greatest Strength consists in two Rows of Sharp Teeth, upper & under, which shut in close to one another, & with which they can bite away any thing that they have a mind to, they run extream swift, but in a direct Line, & if they were able to turn their Body any way that they would, nothing would be able to escape them; they move their upper Jaw, their under one being fix'd, which is contrary to other Animals, most of which move the under Jaw, These Vipers (which as well as the Crocodiles, are produced of Eggs, tho they are much smaller as may be seen under its Head) are call'd Amphisbæna, that is ye Double Head; becaus ye Head & Tail are both alike, & for their Crawling round, for they have Actually two Heads, in ye greater end ye Head & Eyes may be plainly seen, & are Just discernable in ye leſser end, all these Vipers are of very beautifull colours, being adorn'd with Spots of yellow, black, & Cochineal colour, there is likewise another Species of them which are of Grey, White yellow & brown colours.



EXPLICATIO FIGUR. LXIX.

REpræſentatur hic Surinamenſis Crocodili Effigies, ab orientalibus Indis Cayman vocati, eſtque multo robore præſtans & formidabile animal tam hominibus, quam terreſtribus ac aquaticis animantibus; in terrâ enim æque ac in aquâ deget, & quæcunque ſibi obviam veniunt devorat: Ex ovo, ad magnitudinem ovi anſerini propemodum, progignitur, aſt impoſſibile videtur, quod animal, ex tam parvâ machinâ proruptum, ilico ſexies & octies exſtare poteſt majus teſtâ, quam incluſum fuit. Vide tale hic ovum, quod a fronte apertum eſt, ſub poſteriorem hujus animalis ungulam locatum. Licet vero tam parvum naſcatur, nihilominus maximum animal efficitur, quod ex ovo provenit, cum Crocodili aliquando ad viginti, & plurium pedum magnitudinem reperiantur. Illorum Caput, corporis ſuperficies & cauda maxime deſquamata ſunt & dura, ita ut lædi non poſſint, tam mollis vero ventris cutis eſt, ut ibidem facillimé trucidari queant: magnum illorum robur in duabus lineis acutiſſimorum dentium conſiſtit, qui arctiſſime invicem clauduntur, & quicquid arripuêre, illico conterunt. Celeriter curſitant, recto limite, & ſi corpus huc & illuc vertere poſſent, nihil illos effugeret: ſupremarum maxillarum motus fit in ſuperiori capitis parte, cum inferiores immobiles ſunt, quod nullis aliis animantibus commune eſt, quorum omnium maxillæ inferiores moventur.

Viperæ, quæ adinſtar Crocodilorum ex ovis proveniunt, multifariæ ſunt, licet illorum ova multo minutiora ſint. Exemplum vides ſub capite hujus viperæ, quæ vulgo amphysboena, ſive Biceps vocatur, quia ejus caput, & cauda ſibi invicem, reſpectu formæ & circuitûs, ſimilia ſunt; quod vero duo capita haberet, minime verum eſt, cum facile & os & ocelluli in ordinariâ capitis parte conſpici poſſint, aſt minime in alterâ, quæ cauda ejus reverâ eſt. Omnes inter viperas hæcce pulcherrimi coloris eſt, ut pote quæ nigris, Coccineis Flaviſque maculis ornatur: datur & viperarum alia ſpecies, quæ è cineritio ſcilicet albi & flavi, atque fuſci coloris eſt.

EXPLICATIO FIGUR. LXX.

HOcce Animal, quod vulgò *Sauvegard* dicitur (licet hujus denominationis mihi ratio lateat) in Sylvis Surinamenſibus reperitur, & polité ac tenuiter ſquammatum eſt; forma autem & membra adinſtar Lacerti, aſt multò majora, habet: Lacertorum multæ ſpecies dantur, quas inter etiam Salamandra numeratur, quæ inter illas medium tenet, quam Liguanus ſequitur, veluti Crocodilus Liguanum reſpectu menſuræ: Experientiæ defectus nobis prohibet plura de hoc animale deſcribere; notum tamen eſt, illud, ſicuti Lacerti omnes, ex ovis oriri, & non raro devoratorem ovium volatilium in ipſis volucrum ſeptis meis comprehendi.



70.

Explanation of Plate 70th.

This Animal which is commonly call'd Sauvegard (tho I know not y^e reason of that name) is found in y^e Woods at Surinam, & is beautifully & smoothly Scaled, its shape & Members are like a Lizard; but it is much larger, there are many species of ye Lizards, amongst which is reckon'd ye Salamander, which in respect of Bigneſs is a mean between the two Extreams, & next to which follows (in Bigneſs) ye Liguanus, & after ye Liguanes the Crocodile, want of experience hinders me from saying more of this Animal, yet it is known (that like other Lizards) it is produced of Eggs, & it often devour'd ye Birds Eggs in my Ground.

Explanation of Plate 71st

The First Draught of this Appendix was given me by A. Seba, a very excellent & worthy Gentleman, & Posessor of a great collection of Rarities, who kindly communicated to me what he knew concerning ye Generation of Frogs, & of ye changes of Fishes into Frogs & of Frogs into Fishes, which is drawn in this & ye following Plate;

In ye Lower part of this Plate, mark'd with ye Letter A, I have drawn ye changes of ye American Frogs which become Fishes, that which is mark'd with N°1. is ye Figure of the Perfect Frog; the colour of which is between yellow, green & Brown ye Skin on ye Back & sides is adorn'd with Spots, ye Belly is of a more pale & muddy colour, ye hind Feet are like those of a Goose, but ye fore ones like ye Feet of other Frogs,

There are vast numbers of them found in ye River of Surinam, & in ye Creek & Bay of Conwarina, When they are grown to their full-bigness they undergo their change, their Tail by degrees growing out, as may be seen in N° 2, when they Acquire ye Shape of a Fish, their two fore Feet by degrees decreasing & Perishing as in N°3. & ye two hind ones likewise as in N°4, lastly ye whole Frog becomes a perfect Fish as in N°5, These Fishes are call'd by ye Indians, & Europeans livin[g] Jakjes; & is every where in Request, being a delicate Food, it is of ye same substance as our Mustelae, being of ye Cartilaginous kind; it had a Bone quite down the Back, & other small Bones all over ye Body, which is divided into equal parts, they are light, & adorn'd with small tender & Beautifull Scales in ye place of Feet, reaching from ye hind part of their Heads to their Tail, & then again to ye Middle of their Belly, these Animals change likewise their colour, being at first of a Darkish colour, but afterwards Grey.

The forementiond changes are quite different from ye European Frogs which is drawn in ye upper part of ye same plate, mark'd with ye Letter B; this change is in ye Months of March & April, when ye Air begins to grow hot in ye Spring time, When after natural Conjunction, & having laid their Seed, they Croak & breath upon it till it becomes Warm, after which follows ye black Spots in it, as it is drawn at N°1, these receiving Life by ye Heat of the Sun, a small black Animal comes out shaped like a Fish, as N° 2. & in a Days time ye hind Feet appear as N° 3, which in 8 or 10 Days become perfect, as N°4, after which one of ye fore Feet breaks thro ye Skin as at N°5, & presently after ye other appears, which is hinder'd from coming out by a little Membrane of Skin, which it afterwards breaks through, Thus all ye four Feet being come out, ye Head & Body afsumes ye shape of a Frog, see N°6, Then ye Tail begins to Perish, & being grown somewhat lefs appears as it is drawn at N°7, & being Just gone like that at N° 8. & then the Perfect Frog (without ye Tail) is drawn as big as ye Life at N° 9, I am not ignorant that in time they grow to be much bigger & afsume another colour as at N° 10, & even grow to be much larger than that, but I think there is no Occasion to say any thing farther of these Animals.



B.
IV.
V.
VI.
VII.
VIII.
III.
IX.
I.
X.
II.
IV.
V.
III.
II.
I.
A.

EXPLICATIO FIGUR. LXXI.

Magnus & Peritiſſimus multifariæ & exoticæ ſuppellectilis rarioris Poſſeſſor d'A. Seba hacce me Sciagraphiâ donavit, & benigne, quidquid de generatione & Metamorphoſi Ranarum expertus eſt, mihi communicavit, illarum ſcilicet, quæ ex piſcibus in Ranas, & quæ ex Ranis in Piſces mutantur, ſicuti in ſeqq. duabus Tabulis videbis.

In primâ ſive inferiori Tabulâ Litterâ A. Metamorphoſin demonſtrat ſingularis generis Ranarum Americanarum, quæ ex Ranis Piſces fiunt: hic forma, & ad Num. 1. perfectiſſima Rana demonſtratur, quæ paululum flaveſcit & viridi aſſimilis eſt, aſt aliquantulum infuſcatur; cutis earum circa dorſum & latera maculis ornantur; venter vero pallidioris coloris eſt, & nebuloſus; poſteriores pedes anatum, anteriores verò communium Ranarum pedibus aſſimiles ſunt: in flumine Surinamenſi, nempe Cornawina Creek & Piricâ copioſe inveniuntur. Poſtquam plenam magnitudinem conſecutæ ſunt, hinc ilico Metamorphoſis videtur provenire, ita ut caudulam, quæ ſenſim accreſcit, acquirant, uti N°. 11. demonſtratur, & formam piſcis conſequuntur, anterioribus pedibus decreſcentibus & perientibus, ſicut N°. 111. & deinde poſteribribus, veluti N°. 4. exhibetur; tota denique Ranæ forma in Piſcem mutatur. N°. 5. quales mutati Piſces ab incolis Americanis & ipſis Europæenſibus, ibi commorantibus, vulgo *Jakjes* appellantur, atque, ut delicatiſſimum edulium, undique conquiruntur. Ejuſdem ſubſtantiæ, ac noſtra muſtela, ſunt: dorſi ſpina, omniaque oſſicula lenia, & vere Cartilagines ſunt, at in juſtos articulos diviſa: Piſces ipſi Lenes, tenuiter ac eleganter parvis ſquammis, loco pedum, ornati ſunt, qui ab poſteriori capitis parte ſupra caudam, & rurſus uſque ad Ventrem medium expanſi videntur; animalium horum color mutatur, & qui antea ſuboſcurus erat, deinde cineritius exſtat.

Prædicta transformatio Europæenſium Ranarum Metamorphoſi contraria eſt, quare eadem paginâ tabula ſecunda ad Litt. B. harum genituram oſtendit, quæ ad menſem Martium & Aprilem accidit, incaleſcente enim aëre veris tempore animalcula noſtra in ſtagnis & paludibus conveniunt, affectibus naturalibus ſatisdant, atque ejaculato ſemine, coaxant, illudque afflant, ita ut incaleſcat, & viſcoſa hæc materia concreſcat, & ubique paulatim oculos conſequatur, uti figura ad N°. 1. demonſtrat, quæ ſolis æſtu vitam nanciſcitur, N°. 2. ubi ex quolibet ocello nigro motus quidam, adinſtar piſculi, aſt nigerrimi, oriri videtur, qui ad diem creſcit, & primo poſteriores pedes duos acquirit N°. 3. & poſt dierum octo vel decem interlapſum N°. 4. Piſcis, una cum duobus poſterioribus pedibus; apparet, poſt hinc pes anterior Lateris (vide N°. 5.) eruptus, alterque pes anterior jamjam erum pendus conſpicitur, quod tenue ſolummodo membranulum corii tamdiu impedit, donec pes effringendi vires acquiſiverit. Poſtquam vero quatuor pedes prodierint, caput & tota forma Ranam oſtendit juxta N°. 6. Cauda indies perit, ac diminuitur N°. 7. ita ad N°. 8. trunculus tantum, & ad N°. 9. perfecta Rana ſine cauda viſitur, quæ ad vivum non major, quam quæ hic depingitur, eſt, ſed temporis tractu creſcit, aliumque colorem aſſumit, uti ad N°. 10. videri poteſt, imo multo magis creſcit, & tanto major fit, ut non opus plura de iſto animalculo adſcribere putavi.

EXPLICATIO FIGUR. LXXII.

CUm antehac Metamorphoſin & Genituram Americanarum & Europæënſium Ranarum demonſtravi, placet hic mihi addere genituram Aſiaticarum & Africanarum, quæ omnibus modis priorum genituræ aſſimilis eſt, ſi illarum excipias majorem formam & colorem, uti N°. 1. demonſtratur, & Piſciculus ſimul pedes ſuos poſteriores acquirens, (ſicuti forma Europeënſis Ranæ ad Num. 4.) ad figuram, N°. 2. notatam, poſteriores pedes multo majores ſunt. Ad Num. 3. prodit lævus pes anterior, quartus extuberat, & cutem perterebrat. N°. 4. Rana quadrupes ſpectanda datur, capite omnino Ranæ conveniente, aſt cauda minutiore exiſtente, veluti N°. 5. oſtenditur, ubi cauda magis decreſcit, & veram formam accipit; ita ut hoc genus Europæenſibus Ranis conſimile ſit, reſpectu genituræ & incrementi. Num vero hæcce animalcula tractu temporis & accreſcentibus annis rurſus in Piſces mutantur, nemo adhuc expertus eſt, vel documentum aliquod vidit aut reſcivit.

Ulvam, quæ circa Ranas in aquâ cernitur, & Litt. A. notatur, Africa nobis apportat, ubi copioſe ex Mari, Ulvarum denominata, colligitur, & tam generis, quam coloris diſpar eſt. Litera B. maculam coralinam (belgicè *een Coraalmoesje*) conchæ innatam, demonſtrat, uti & minutam arcam, Noëam dictam, quæ in Guinæa reperitur, veluti Ramulus marinus, Litt. C. ſignatus. Infimæ duæ Conchæ, Litt. D. notatæ, rariſſimum genus Amboïnenſium Criſtarum Galli ſunt, quæ invicem ſibi quadrant, & infrequentis formæ ſunt. Concha, quam Litera E. exhibet, & cujus os hic ſurſum elevatum conſpicitur, rara Amboinenſis Buccina, achatis adinſtar, eſt, diverſis coloribus ornata, ita & Concha altera Amboïnenſis Lit. E. elegantiſſimæ picturæ eſt. Bruchus, Litera G. deſignatus, Mochæ reperitur, & non ſolum plane niger eſt, ſed pulcherrime Refulget, & duo rariſſima cornicula gerit, quæ inter longum roſtrum eminet, adinſtar Elephantis.

Arborem Arekam, licet hic delineatam videas, non animus eſt deſcribere, quoniam jam ſæpius & prolixe hoc ab aliis factum eſt, qui de extraneis arboribus tractarunt; ſolum hoc loco eam exhibui, ad Erucas & Papiliones, qui ſuper illam proveniunt & gignuntur, demonſtrandos. Magna illa Eruca alimentum ex floribus petit, & fructu hujus arboris, & ſtatim ac plenâ magnitudine potita eſt, in Aureliam mutatur, unde poſt aliquot dies pulcherrimus Papilio, formoſis nigriſque alis ſupernis, infernis vero aurei coloris, erumpit, quæ nigris marginibus ac ſtriis fimbriatæ ſunt, ipſius Papilionis dorſo rubicundis punctulis decorato. Secundum tertiumque genus nigrum etiam ac flavum eſt, pulcherrime depictum, & excelſi coloris eſt, atque illius natura & proprietates cujuslibet dignæ ſunt perſcrutationis.

FINIS.


G
N°. 5
N°. 1
B
A
C
N°. 4
N°. 2
A
N°. 3
A
D
F
E

Explanation of Plate 72d

Having in ye foregoing Page describ'd ye changes of ye European & American Frogs, I shall here adjoin those of Asia & Africa, which altho in colour & Shape they differ from those of Europe, yet their change is exactly ye same,

The Fish is drawn in No. 1, and their hind Feet growing out (as ye European in No. 4 of ye last Page) it appears as it is drawn at No. 2, then ye left fore Leg comes out (No. 3) and after that ye right one appears, & breaks ye Skin, & ye Frog is drawn with 4 Feet at No. 4; after which ye Tail begins to Perish, & (being almost gone) is drawn with true Shape at No. 5, so that they resemble ye European Frogs both in their Generation and Changing, ~ But This Animal in a Tract of time, after many years growth is again chang'd into a Fish; tho the manner of which is Unknown to any;

The Sea Weed which is drawn amongst the Frogs & mark'd with ye Letter A; is brought to us from Africa, where it is taken out of ye Sea, it is of many kinds differing in colour, The Letter B. marks a Lump of Coral (call'd by ye Dutch een Coraalmoesje) growing about a shell Fish; the Letter C, shews a small Branch which is found about Guinea, & is there call'd Nocam, or ye Sea Bough, the two small shell Fishes mark'd with ye Letter D, are two rare Cocks Comb shells of Amboina, they are both alike & of an uncommon form, The Letter E, shews a curious Trumpet Shell of Amboina resembling Agate, & with ye Mouth turn'd up; it is of various colours as is likewise ye other of ye same place, Mark'd with F. the Beetle mark'd with G. is found at Mocha, & is of a beautifull shining Black, it has two large Horns, between which is a long Trunk or Snout like an Elephants Proboscis;

The Tree call'd, ye Indian Nut Tree, I shall not describe, it having been already sufficiently well done, by those who have written of ye Trees of Foreign Countries, I have therefore only drawn it, that I might describe ye Caterpillars & Butterflies, that live & breed thereon, The largest Caterpillar feeds on ye Flowers & Fruit, & as soon as they are grown to their full bigness they change into Chrysalis's, from one of which in a few Days, came a beautifull Butterfly ye upper Wings of which were black & finely Shaped, ye under ones were yellow, Edged & vein'd with black, & ye Back was spotted with Red, the second & third sort were yellow & Black, beautifully mix'd & excellent colours, and their Nature & Properties are worthy of a diligent observation.

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